Drogan Notes: Communications
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James Drogan

James Drogan
2014
# Contents

Preface .................................................................................................................................................. xv
Sixth Annual Symposium on Communication and Communication Intensive Instruction .......... 1
Another Look at Communication Effectiveness ...................................................................................... 5
   Introduction ........................................................................................................................................ 5
   Discussion .......................................................................................................................................... 5
   Conclusions ....................................................................................................................................... 9
   Recommendations .......................................................................................................................... 10
The State of the Blogosphere ................................................................................................................ 11
Two Strategies for Avoiding Truth .......................................................................................................... 13
The Role of Visualization in Communication ......................................................................................... 15
   Introduction ....................................................................................................................................... 15
   The Run-up to Pattern Recognition .............................................................................................. 15
   Pattern Recognition ....................................................................................................................... 20
   Coda ................................................................................................................................................ 25
   Bibliography .................................................................................................................................... 26
7th Annual Symposium on Communication and Communication Intensive Instruction ............... 27
   Bibliography .................................................................................................................................... 35
Channels, Audience Needs, and Communications: The Rise of an Idea ......................................... 37
   Introduction ....................................................................................................................................... 37
   The Morning Discussion ................................................................................................................. 38
   The Afternoon Discussion ............................................................................................................. 39
   Conclusions and Recommendations ......................................................................................... 42
   Author Notes ................................................................................................................................... 42
   Bibliography .................................................................................................................................... 43
Managing the Business .......................................................................................................................... 45
Ethics, Critical Thinking, and Communications .................................................................................. 51
   Introduction ....................................................................................................................................... 51
   Ethics ............................................................................................................................................... 52
   Critical Thinking ............................................................................................................................ 55
   Communications ............................................................................................................................ 62
   Coda ............................................................................................................................................... 65
   Appendix ........................................................................................................................................ 66
   Bibliography .................................................................................................................................... 67
Musings on the State of Communication ............................................................................................... 69
The Digital Bubble .................................................................................................................................. 71
It’s hard to know when I began to think about communication is a serious manner. I peg it at my first job out of college as a systems engineer for IBM. I’m fairly certain that I didn’t think of it in that manner. I thought of flowcharts (communicating with people) and coding sheets (communicating with computers), both of which I learned little of in college.

As my career developed I expanded my communication repertoire to formal presentations, one-on-one conversations with business associates and customers, writing of proposals, reports, and marketing material.

When I retired from IBM I became associated with Baruch College. This second career introduced me in a more formal way to communication, especially through my long association with the Bernard L. Schwarz Communication Institute.

I’m indebted to all those along the path of this journey who encouraged, criticized, taught me, and, perhaps most importantly, encouraged and gave me the freedom to explore communication and its higher embodiment, conversations. I’ve been from script to spark charts (Tufte), from simple flowcharts to complex causal loop diagrams. And I keep learning.

What follows is a collection of papers, blog posts, the odd e-mail, and lecture notes on the subjects of communication and conversation. These are presented in chronological order. Some of this material looks incomplete. Indeed it is. Learning is never complete. Minimal editing has been performed on the original material.

The first paper in this anthology is a paper written to help me prepare for an April 28, 2006 conference. Doubtless I will add to this as time goes on.

It is hoped that this collection might serve as useful reference and example.

James Drogan
December 24, 2014
1. **What?**
2. **Why?**
   a. To be polite
   b. To attract attention
   c. To inform
   d. To prompt action

   *The what and why of communication are intertwined. One or the other may be the antecedent depending upon why the communications is to take place. For example, just about any kind of a "what" may be used to attract attention. On the other hand, if the intent is to inform, then the "what" can't be anything that comes along.*

3. **How?**
   a. Speaking, writing, personal appearance, body language, appearance of documents, listening, observing, and questioning
   b. How is modified by the medium of communication
   c. How is modified by the context in which the communication takes place
i. Culture
   1. Cover my butt
   2. Chain of command
   3. Publicly
   4. Privately

4. When?
   a. Timing as part of the communication
   b. At times the best thing to do is say nothing

5. Where?

6. Who?
   a. Depends upon the why and the culture

7. Similarities and Differences in Communications in Education and Business
   a. Similarities
      i. Dependencies
         1. Critical Thinking
   b. Differences
      i. Purpose
      ii. Timing
      iii. Speed
      iv. Risk
      v. Uncertainty

8. Linkage Between Academia and Business: Roles, Responsibilities, Outcomes, and Inputs
   a. Business describes needs
   b. Academia meets needs

*Academia produces an output – students with sets of knowledge, skills, and experiences – that ought to be intended to meet the needs of its principal customers – the students and the organizations that they will join.*

---

**The Gap Hypothesis**

A critical question to be addressed is whether a gap exists between the needs and capabilities.¹

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¹ J. Drogan, Information Technology as a Connector Between Higher Education and Business, CUNY’s 2nd Annual IT Conference “Instructional/Information Technology in CUNY: Issues, Innovations, Integration,”
9. Measuring Effectiveness
   a. Decision windows: effectiveness of communication is measured by the degree to which the communication permits decisions to made while the decision window is open.²

   b. SIDAL: effectiveness of communication is measured by the degree to which the communication SIDAL activities.³

10. Principles
   a. The grammar and syntax of the messages being exchanged is easily understood
   b. The information communicated in the messages is relevant

November 14, 2003 (working draft)
² J. Drogan, Ideas to Initiatives to Business Value, March 1, 1999
³ J. Drogan, TMGT 7300 MIS in Transportation Lecture Notes, Maritime Graduate Program, Spring 2005
c. The medium of communication is acceptable

d. There is a desire to communicate (an exchange of value

11. Issues

a. "The BBC reports on a study saying that, despite the depth of content internet search providers offer, most people stop at page 3 or earlier." From the article: "It also found that a third of users linked companies in the first page of results with top brands. The study surveyed 2,369 people from a US online consumer panel. It also found 62% of those surveyed clicked on a result on the first page, up from 48% in 2002. Some 90% of consumers clicked on a link in these pages, up from 81% in 2002."  

4 http://slashdot.org/articles/06/04/13/2141221.shtml
Another Look at Communication Effectiveness

June 29, 2006

Introduction

The Bernard L. Schwartz Communication Institute at Baruch College sponsored its Sixth Annual Symposium on Communication and Communication Intensive Instruction on April 28, 2006. The theme was "What is 'Effective?': Assessing Communication in Education and Business."

I was pleased to serve as one of the moderators at the symposium. The conversations and outcomes from the event, along with subsequent thinking, have prompted this additional look at communication effectiveness.

Discussion

Opening Points

Effectiveness

def·ec·tive
adj.
a. Having an intended or expected effect.
b. Producing a strong impression or response; striking: gave an effective performance as Othello.

Efficiency

def·fi·cien·cy
n., pl. -cies.

1.

a. The quality or property of being efficient.
b. The degree to which this quality is exercised: The program was implemented with great efficiency and speed.

2.

a. The ratio of the effective or useful output to the total input in any system.
b. The ratio of the energy delivered by a machine to the energy supplied for its operation.

"I believe that we’re about to witness what may turn out to be the last competitive frontier business will see. It’s going to be a war over the one priceless resource. Time. And when it comes, trust may turn out to be the best investment anyone’s made."

5 My preparatory notes for the symposium may be found at http://jmsdrgn.squarespace.com/storage/schwartz%20symposium%20six.pdf

6 The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2004, 2000 by Houghton Mifflin Company. Published by Houghton Mifflin Company. All rights reserved.

7 ibid.

"There is nothing more inefficient than making more efficient that which we shouldn't be doing at all."  

First impressions are always important. It's worthwhile giving them some attention even though we may modify these on the basis of additional information and further consideration. These opening points came immediately to my mind.

There is an intimate relationship between effectiveness and efficiency that with the evolution of global business has become increasingly critical. There was a time when one could trade efficiency for effectiveness. I don't believe that to any longer be the case.

I arrive at this point through my own observation and the observations of seasoned executives like Jim Kelly of UPS. Time is the competitive frontier and trust is the preferred weapon.

Trust, of course, requires time to build and time is an increasingly precious resource.

As a consequence, we are led to the need for a deeper understanding of how we invest this increasingly precious resource.

Which brings me to Anthony Zecca's comment regarding inefficiency.

The Perfect Relationship

Consider the following dialogue.  

He: "Where did you put it?"

She: "What?"

He: "You know."

She: "Where do you think?"

He: "Oh."

My conclusion is that this is very effective (He found out where It was) and efficient (although I suppose the She could have simply pointed and 13 words would have been reduced to five and a gesture), and trust played a major part in the communication.

We perhaps might question whether the communication needed to take place at all (i.e., the Zecca Rule). But that is not a point I wish to take up just yet.

Effectiveness of Communication

My view is that communication is effective if it achieves the desired outcome.  

To prompt action is the most significant of the desired outcomes. Action suggests that one's ultimate aim is to affect a higher-level outcome. For example, in undergraduate education we often give midterm grades. In some cases these cause underperforming students to change their course of action when they realize the likelihood of an unfavorable outcome.

In business we may be seeking to close the sale before our competition can strike.

In my preparatory notes for the symposium I take up the issue of smaller and smaller decision windows.

---

9 Anthony Zecca, Cohn Consulting

10 J. Drogan, Class Notes: TMGT 7300 C Su5 Transportation Management Class 10 June 25, 2005, SUNY Maritime

11 In this note I want to use outcome to mean something nontrivial. In my preparatory notes for the symposium I identified the following reasons to communicate: a. To be polite, b. To attract attention, c. To inform, d. To prompt action. I'm considering here that that c and d are nontrivial.
Time, therefore, plays an increasingly important role in deciding whether or not the outcome is achieved.

**Efficiency of Communication**

Efficiency, crudely put, is the ratio of outputs to inputs. When discussing communications this is perhaps better described as the ratio of the odds of achieving the desired outcome to the effort required to achieve the outcome.

"I didn't have time to write a short letter, so I wrote a long one instead."\(^{12}\)

Herein is posed an issue regarding efficiency. From what point of view should the efficiency of communication be judged? The sender, the receiver, both? One ought to task the same set of questions with respect to effectiveness.

One might argue that the use of emoticons (i.e., 😊) and SMS text is offensive. For example;

"If we shadows have offended. Think but this, and all is mended, That you have but slumber’d here While these visions did appear. And this weak and idle theme, No more yielding but a dream, Gentles, do not reprehend: if you pardon, we will mend: And, as I am an honest Puck,"

Some may recognize this from William Shakespeare's *A Midsummer Night's Dream*.\(^{14}\) But the question here is not one of elegance in the use of the language, but rather efficiency in communication.\(^{15}\)

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12 Mark Twain (American Humorist, Writer and Lecturer. 1835-1910)


14 If we shadows have offended,
Think but this, and all is mended,
That you have but slumber’d here
While these visions did appear.
And this weak and idle theme,
No more yielding but a dream,
Gentles, do not reprehend:
if you pardon, we will mend:
And, as I am an honest Puck,

**Efficiency, Effectiveness, and Time**

One view of the merger of these three aspects of communication is shown here.

![Graph showing the relationship between time and the decision window.](image)

The abscissa (communication spectrum) is labeled with Symbols on the left as an example of communications requiring little time to produce, and with Scholarly Works on the right as an example of communications requiring relatively more time to produce.

The ordinate represents time.

The diagonal line is the hypothesis that the time required to communicate by means of a symbol is relatively less than the time required to communicate by means of scholarly works. I recognize that the information being communicated in symbols and scholarly works is generally not the same, but assume, for the purpose of argument, that the information in both cases is substantially the same.

The horizontal line represents the time the decision window is open. The size of a decision window is the amount of time one has after an event occurs to affect the outcome. The forces of business are continuing to push this boundary lower in this diagram.

The point here is that as the decision window becomes smaller one is pushed towards the left of the communication spectrum.

Where, in the spectrum, is teaching (e.g., WAC, CAC) concentrated?

**Outcomes**

Perhaps nothing is more important in assuring effectiveness in communication than a clear understanding of the desired outcome.

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16 There is an interesting implied question here regarding the time required to be able to effectively use a symbol.

17 An interesting example of this is to consider Einstein where the symbol $E=mc^2$ represents substantial scholarly work.

18 An interesting topic of discussion would compare and contrast the bandwidth of the sender, the communications channel, and the receiver. A hypothesis is that the most efficient and effective communication occurs when the bandwidths match.
Communications and the Internet

I suspect that all have, at one time or another, been frustrated by an Internet search that, no matter our phrasing of the inquiry, did not seem to return usable results. Yet, most of us have met people who seem to be quite good at this task.

Why is that?

Consider the following principles of communication:

a. The grammar and syntax of the messages being exchanged is easily understood
b. The information communicated in the messages is relevant
c. The medium of communication is acceptable
d. There is a desire to communicate (i.e., to exchange value)

I suspect that the search cognoscenti have a different sense of principles a. and b. than does the average user of net search. Their Internet information literacy is better than most. 19

Search is an example of communicating with a "thing" not a person.

"Today, in the 2000s, we are headed into a new era of ubiquity, where the 'users' of the internet will be counted in the billions and where humans may become the minority as generators and receivers of traffic." 20

Communicating with things may be different than communicating with people. Indeed, we may not even know we are communicating. Is this a good thing? 21

If the internet is becoming the throbbing heart of discovery, what needs to be done and is being done, to improve the internet information literacy of the user community? A corollary question deals with the internet adapting to the person.

Conclusions

Communications is undergoing fundamental, irreversible change due to:

1. Time – less and less.
2. Breadth and depth of data, information, and knowledge – more and more.
3. Reach, range, and behavior of information systems22 – increasing ubiquity, connectivity, and intelligence.

These forces put pressure on traditional ways of communications that results in demand for additional bandwidth. And by bandwidth I mean the notion of comprehension and action not the more traditional definition of the amount of data that can be passed along a communications channel in a given period of time.

Coping with these changes requires increasing skills in discrimination. We might also ask ourselves what is required to effectively use the power of discrimination. 23

19 For an interesting discussion of this issue see J. Battelle, The Search: How Google and Its Rivals Rewrote the Rules of Business and Transformed Our Culture, Portfolio Hardcover (2005), 1-591-84088-0
22 Information systems comprise processes, people, and information. In some cases these information systems are improved and/or enabled through the application of technology.
23 This line is suggested by the June 11, 2006 comment by Joe Ugoretz on cac.ophony.org regarding student experiences with Wikipedia. See http://cac.ophony.org/2006/06/18/wikipedia-tightens-its-editorial-policies-ever-so-slightly/#comment-1243
**Recommendations**

We can agree, I hope, on the need for effective and efficient communications. And as an extension of the first statement, I hope we could agree that the major, but not only, goal of effective and efficient communications is to be able to survive, thrive, and make a difference in that world outside of academia.

1. I've simplified the issues as I see them into two spaces, shown by the circles in the above diagram.
   a. Where are the spaces?
   b. What is their shape?
   c. How are they moving?
2. How do we reshape our teaching to improve the student's ability to perform in the act space?
3. What are the roles and responsibilities of business and academia in resolving the issues?
4. Which existing business and academic institutions are prepared to collaborate to move forward?

Critical comment on the above is invited.

James Drogan
June 29, 2006
The State of the Blogosphere

August 12, 2006

Re Conversations with Dave

Dave directed me to State of the Blogosphere that generated the following reply.

As one of my clients always used to say; "So what?"

Doubtless someone has thought about this and its implications on the grand scale. All I have is Drogan Scale.

Drogan Scale suggests that I am more aware of more stuff than before, but I don't know that I have more interesting conversations than I had before; or am engaging in more meaningful actions than before.

Perhaps the state of the blogosphere is akin to the state of open fire hydrant.

Update on Saturday, August 12, 2006 at 08:40AM by James Drogan

I reminded of the story that ends with; "There's a pony in here somewhere."

There is garbage in the blogosphere. We are under no obligation to review it.

There is likewise quality in the blogosphere. We are likewise under no obligation to review it.

We need, I think, to be willing to wade through the former to get to the latter. And we need, I think, to teach others to do likewise.

We can't learn discernment without seeing both sides. My wife likes to say; "You can't have the peaks without the valleys."
Two Strategies for Avoiding Truth

January 6, 2007

This morning, Greg Mankiw's Blog brought me a link to this article. It caught my eye because of the continuing conversations that Dave and I have regarding the lack of critical thinking on the part of the body politic -- those I once characterized as being satisfied with "a beer, a boat, and a sound-bite."

While the article has a definite political theme running through it, there are some fundamental ideas that bear consideration by, for example, my students at Maritime as they develop their critical thinking and communications skills.

"The more knowledgeable we are, the more we follow a high-investment strategy of selectively accepting evidence that favors our outlook while discounting contrary information." should be seen as a caution to all of us.
The Role of Visualization in Communication

January 29, 2007

Introduction
I posted the following on cacophony.org.

Visual Communication
Published by James Drogan January 27th, 2007 in Uncategorized. 2 Comments

Today, Smart Mobs has brought my attention to a visualization site — Many Eyes — established by IBM. This then set me to thinking about how we contend with the increasing flood of data, information, and knowledge that assaults our senses. This leads to the notion of pattern matching.

My hypothesis is that pattern matching could be an essential tool for communication in the emerging world.

I don’t recall much conversation about visualization and pattern matching in our discussions on communication.

Deborah Gambs commented.

Deborah Gambs Jan 27th, 2007 at 2:53 pm

I think this raises an interesting question Professor Drogan. In particular, I am wondering if you really meant ‘pattern matching,’ or ‘pattern recognition.’ Either way, I would like to hear more about what role you think it might play in visual communication. Or at least in our sorting of the visual information that is so abundant these days!

I replied.

James Drogan Jan 28th, 2007 at 8:53 am

Similar to Fermat’s Last Theorem (“I have a truly marvelous proof of this proposition which this margin is too narrow to contain.”), the area in this blog may be too small, Deborah, to say what I want to say about this.

Please give me a bit of time to put together a little piece on this.

Jim

The Run-up to Pattern Recognition
Gambs is, I think, correct in calling attention to “matching” versus “recognition.” My basis for coming around to her way of thinking is based on the notion of the Sense, Interpret, Decide, Act, and Learn cycle.24

---

Speed, complexity, and uncertainty drive the need for an adaptive system.

Figure 1 Sense, Interpret, Decide, Act, Learn Cycle

I link the word “matching” with Sense, the word “recognition” with Interpret. Matching is seeing; recognition is understanding. Seeing without understanding is of little value.

So let’s accept Gambs’ recommendation because it is a more powerful idea and moves us around the cycle toward action.

What, therefore, need we do in the context of “…the increasing flood of data, information, and knowledge…” to make an advantage of visualization?

We can begin to find the answer by revisiting the principles of communication.25

1. The grammar and syntax of the messages being exchanged is easily understood
2. The information communicated in the messages is relevant
3. The medium of communication is acceptable
4. There is a desire to communicate (i.e., to exchange value)
5. There is confirmation of understanding.

The grammar and syntax of visual messages is different – very different – than that associated with written and oral communication.

---

Consider Figure 2 An Example of Visualization. The implications for grammar and syntax are very significant. They are defined not by words, but rather one’s grasp of history, current affairs, culture, vocations. The intent of the sender is to invoke a certain understanding in the mind of the receiver. Does it work? How do we know? How do we confirm understanding? Is this communication or cleverness?

My personal experience with visualization goes something like this.

1. An idea emerges in the fabric of the mind.
2. I reach for a tool (e.g., paper and pencil, Visio ©, MindManager ©) and begin to sketch the idea.
3. If need be, I gather data in support of the visualization.
4. I complete the packaging of the idea. When creating visual objects for papers, such as I’ve done herein. Packaging always includes a related narrative. Yes, when doing this I’m hedging my bet in order to assure understanding.
5. I then step away, try to put myself in the mind of someone looking at the visualization, and draw a conclusion as to odds of my communication being successful.

Does the pattern (i.e., results of this visualization process) I have sketched match the pattern in my mind? Do I recognize what I have done?

As an aside, you may find it of interest that when I decided to put in these few words about my personal experiences I first reached for Visio ©. The pattern did not emerge in a meaningful way.

The five-step process outlined above suggests a set of knowledge, skills, and experience, and inclination to approach a matter of communications in a certain way. The knowledge and skills can be taught. The experience accumulated. But what about inclination?

Inclination has some other source and, if missing, discounts the knowledge and skills that have been learned.

The second principle of communication – The information communicated in the messages is relevant – also needs some consideration. Edward R. Tufte is the expert in this area I know best.

---


27 All my written communications are generally marked by a reasonable large percentage of the content being visual objects. Visualization is an inherent part of my thinking process. It consequently biases this note.
Figure 3 Napoleon’s March to Moscow - The War of 1812²⁸

Tufté considers this “Probably the best statistical graphic ever drawn, this map by Charles Joseph Minard portrays the losses suffered by Napoleon’s army in the Russian campaign of 1812. Beginning at the Polish-Russian border, the thick band shows the size of the army at each position. The path of Napoleon’s retreat from Moscow is depicted by the dark lower band, which is tied to temperature and time scales.” As such there is a considerable amount of relevant information clearly communicated in this visual.²⁹

The word “relevance” has been used several times. Without relevance communication is meaningless. Relevance means that the data, information, and knowledge communicated will lead to the desired outcome.

Suppose, as an example, you wished to inform someone of the value of the US dollar versus G-10 countries.³⁰

Another way to do this is to show the underlying data.

Table 1 Value of the US Dollar versus G-10 Countries (raw data)

<table>
<thead>
<tr>
<th>Year</th>
<th>USD vs G-10</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>89.20</td>
<td>Federal Reserve Bank of St. Louis</td>
</tr>
<tr>
<td>1995</td>
<td>90.49</td>
<td>Federal Reserve Bank of St. Louis</td>
</tr>
<tr>
<td>1996</td>
<td>92.37</td>
<td>Federal Reserve Bank of St. Louis</td>
</tr>
<tr>
<td>1997</td>
<td>94.50</td>
<td>Federal Reserve Bank of St. Louis</td>
</tr>
<tr>
<td>1998</td>
<td>96.71</td>
<td>Federal Reserve Bank of St. Louis</td>
</tr>
<tr>
<td>1999</td>
<td>99.02</td>
<td>Federal Reserve Bank of St. Louis</td>
</tr>
<tr>
<td>2000</td>
<td>100.93</td>
<td>Federal Reserve Bank of St. Louis</td>
</tr>
</tbody>
</table>

Clearly the trend is better shown in Figure 69 Value of the US Dollar versus G-10 Countries than in Table 1 Value of the US Dollar versus G-10 Countries (raw data). That is, the data has been made more relevant.

This is admittedly a simple example of the visualization of data that increases its relevance. However, it is illustrative the knowledge and skills necessary to make data as relevant as possible.
Before we get into the heart of Gambs’ comment – pattern recognition – a few words should be said about the third principle – The medium of communication is acceptable.

I encourage my students to produce written material that contains visual objects and that is submitted to me in a revisable form over the Internet. I discourage “hardcopy” submissions. That is, my preferred medium is the Internet. The communications process is simply much more effective when using the Internet and it is generally the preferred medium outside of academia.

The Internet is also conducive to visualizing data.

**Pattern Recognition**

![Figure 5 Union Pacific Railroad Dispatching Center](http://www.gatewaynmra.org/prototype/UP_Dispatching_Center.jpg)

Figure 5 Union Pacific Railroad Dispatching Center represents a portion of the Union Pacific rail network. It is depicted in a schematic form and the colors represent the state of various portions of the network. An experienced operations person can, at a glance, get an overall view of the health of the operation. Colors, symbols, and the way they are presented are designed to draw the attention of the operators to those areas needing their attention.

The power of visualization is in drawing attention to that which needs attention.

It does this by presenting information as a pattern that is then compared to patterns that are in the mind of the receiver.

There are two important points here.

First, a relevant pattern must be presented to the observer.

Second, the observer must be able to interpret these patterns.

Now in written and oral communication the same points apply, but the patterns are different.

---

An English speaker would recognize the left and right pattern; the Mandarin speaker the center and right pattern. The visualization of the concept at the right is more easily understood by more people.

Suppose one wanted to determine the most influential people in an organization. One might hypothesize that those who seem to be in the midst of most of the communications would be considered amongst the most influential.

Visualizing the interactions causes the influential to clearly stand out. This information is important when developing and managing change management strategies. What the data tells you when presented is likely to have little relationship to the organization chart (the organizational pattern most of us carry in our heads).

---


33 Shi Win Jing advises me that the latter part of this sentence is not entirely true. She advises me that older Chinese will understand the pictographs, but not the pinyin.

Suppose you wanted to quickly know the themes in a written work.

Word clouds are a visualization of words contained in documents. The more prominent the appearance of the word in the document, the more it stands out in the cloud. Suppose one was performing a literature search using a search strategy based on words. The resulting word clouds could give you patterns that you could match with your mental patterns thereby leading to more useful search results.

Here is a visualization of potential impact of downsizing. A visualization of processes can be a powerful way to understand how goals and objectives are accomplished.

---


36 http://www.exponentialimprovement.com/cms/uploads/downsize363.jpg [January 29, 2007] 'Loop B1 shows that individual companies make rational decisions to downsize to reduce company expenses; this reduces industry and excess capacity. But loop R2 shows the sum of all the downsizing decisions has an overall industry "side-effect" of reducing employment, income, and demand to create even more excess capacity. This economic vicious cycle can lead to overall economic collapse. From Sterman, "The Long Wave Decline and the Politics of Depression."
Haeckel and Nolan have written about the need for visualization of data in business operations.\textsuperscript{37} They present their argument for this in the context of businesses of greater complexity needing to deal with ever increasing rates of change, risk, and uncertainty.

\textbf{Figure 10 Complexity and IQ}

My sense is that visualization will play an increasingly prominent role in enabling the communications necessary for companies to thrive in the emerging business environment.

There is also the concept of smaller and smaller decision windows.

\textbf{Figure 11 Decision Windows}\textsuperscript{38}


\textsuperscript{38} James Drogan, \textit{A Note on Fact-Based Hypothesis-Driven Thinking} 2005, Available:
In a world of increasing complexity and speed, on the one hand, and smaller decision windows, on the other hand, we need to find a way to increase the bandwidth available in support of Sense, Interpret, Decide, Act, Learn cycle. I argue that visualization is a means to do just that.\textsuperscript{39}


Coda

Pattern recognition is part of every day for most of us. We glance out of the window in the morning and check the weather pattern. We check the pattern of the people queued at our favorite coffee shop to decide whether or not we should detour to an alternative shop. We look at the pattern of traffic before deciding to cross in the middle of the block.

Pattern recognition and visualization are so commonplace we tend not to give either much consideration. However, imagine you had been blind from birth. Pattern recognition in the context of visualization would be an alien concept.

Inasmuch as most of us are broadly familiar with pattern recognition and visualization, we ought to strengthen these abilities for the reasons mentioned above.

Visualization is not about pretty pictures that excite (or not) the emotions. It is about developing a deeper understanding more quickly than would otherwise be possible.

What’s required is an understanding of the knowledge, skills, and experience required for effective and efficient communicate across the oral, written, and visual modes of communication.

<table>
<thead>
<tr>
<th></th>
<th>Oral</th>
<th>Written</th>
<th>Visual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skills</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 What We Need to Know

We need to know which mode is most effective and efficient when. We need to know what the long-term trends for communications are in the various modes. We need to know what is required to be effective and efficient in a particular mode.

Then we need to use this knowledge of communication to develop ways of learning how to be better communicators.

James Drogan
January 29, 2007
Bibliography


I. Current State

A. Principles of Communication
   1. The grammar and syntax of the messages being exchanged are understood.
   2. The information communicated in the messages is relevant.
   3. The medium of communication is acceptable.
   4. There is a desire to communicate.
   5. There is confirmation of understanding.

B. Cultural Issues

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James Drogan, New Rules Convention and Change in Communication, mpp file, [April 15, 2007]
1. Project GLOBE

A further look at the culture

**Dimensions of Culture**
- Assertiveness
- Future Orientation
- Gender Differentiation
- Uncertainty Avoidance
- Power Distance
- In-Group Collectivism
- Performance Orientation
- Humane Orientation

**Cultural Groups**
- Anglo
- Arab
- Confucian
- East Europe
- Germanic
- Indigenous Africa
- Latin America
- Latin Europe
- Nordic
- South Asia

Figure 13 Project GLOBE Summary

C. Generational Issues
1. SMS vs E-Mail
   a. Based on experiences at *Executives on Campus Freshman Seminar for Learning Communities*, Baruch College, October 2006
      - Baby Boomers ~ comfort with e-mail
      - Millennials ~ comfort with SMS

D. Time Issues
1. The time available to cycle through SIDAL continues to decrease.
2. "I also think that time is going to "shrink" to the size of a "dot" (instantaneous communications, time zone borders disappeared, etc.): what today takes hours, will take seconds and even milliseconds in the future. Thus, it will also require the increased

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43 James Drogan, 1. Introduction to the Course and to International Physical Distribution Systems, ppt file, [April 15, 2007]
accessibility of human participation (even in the case when most of the processes are automated, the speed of communications and automation might be so high that rotation “human mind/machine” would be speeding up exponentially).  

E. Institutional Issues  
1. The Gap Hypothesis  
   a. A gap exists between what the academe produces and what the business world wants in communications skills  

F. Motivators of Communication  
1. To be polite  
2. To attract attention  
3. To inform  
4. To prompt or forestall action  

II. Forces of Change  
A. Time - less and less is available to make decisions  
1. Bandwidth is increasingly feeding the human machine of intuition which becomes more effective and efficient at deploying SIDAL thus leading to decision windows that continually decrease in size  

![Figure 14 SIDAL](image)

2. Decisions are being made faster - it does not follow that the decisions are better  
3. Ability to navigate the loop for an opportunity of a given complexity improves over time. As a consequence we tend to take opportunities of increasing complexity.

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46 Elena Novikova, Discussion Response in Module 14 The Future of TMGT 7300 DL Sp7 MIS in Transportation, Maritime Graduate Course, April 24, 2007  
48 James Drogan, 7300 DL Sp7: SIDAL, vsd file, April 15, 2007  
49 By a better decision I mean producing the desired outcome more efficiently or a better outcome with acceptable efficiency.
B. Breadth and depth of data, information, and knowledge - more and more.

1. Users

Internet Usage Growth
1995 - 2006

![Graph showing the growth of Internet usage from 1995 to 2006.](image)

2. Traffic

“How Big Is The Internet?”

Good question. To give you an idea, when Bill Clinton was inaugurated as President there were 200 domain hosts in use (200 numeric addresses in use and only eight (8) of them ended in .com or .net! As of January 1, 2004 there were 194,000,000 domain hosts in use.”\(^{51}\)

3. Pages

“Google 3.083 billion pages.”\(^{52}\)

“So How Fast Is The Internet Growing?”

Research shows that the known Internet - the Internet excluding the Deep Web is growing by more than 10,000,000 new, static pages each day. In contrast, the fastest growing search engine database is increasing at about 10% of this pace.”\(^{53}\)

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52 Ibid. Only about 10% of the Internet is accessed.

53 Ibid
C. Capacity mismatches

1. The SIDAL boxes are not all the same size
2. The context in which SIDAL exists grows in size faster than SIDAL capacity
3. Capacity mismatches – a function of the degree of translation that needs to take place at the interface (hypothesis)
   a. Perhaps a significant issue needing to be addressed by neo-communications

D. Reach, range, and behavior of information systems - increasing ubiquity, connectivity, content and intelligence
   1. Connectivity and collaboration to grow and apply collective intelligence

E. Conflict
   1. Issue with the willingness of principals to apply principles
      a. There is a desire to communicate.
      b. There is confirmation of understanding.

III. Potentialities
A. Resurgence of Tradition
   1. Unlikely – does not deal with the issues of translation and capacity mismatch

B. Pattern Recognition
   1. Likely – offers an opportunity to address the issues of translation and capacity mismatch
      a. Requires new skills

C. Collaboration
   1. Likely – offers an opportunity to address the issue of capacity mismatch
      a. May introduce unacceptable interaction costs

D. Meta-Culture
   1. Not likely – Esperanto redux

54 See Drogan, The Role of Visualization in Communication]. for ideas on dealing with the issue of capacity mismatch.
55 James Drogan, Bizz School Re-Thinking 6/19/5
56 An artificial international language with a vocabulary based on word roots common to many European languages and a regularized system of inflection. Answer.com [April 8, 2007]
a. See comment on conflict
b. Lack of propensity for cultural assimilation

"U.S. 301,564,994, World 6,587,534,991, 22:37 GMT (EST+5) Apr 08, 2007"\textsuperscript{57}

E. Multi-Culture
1. Not likely – the notion of using multi-cultural (akin to multi-lingual) knowledge, skills, and experience to support improved communication
   a. Difficulty in acquiring the knowledge, skills, and experiences

F. Rosetta Stone
1. Note likely – a universal translator may be possible, but it is unlikely to deal with the subtleties of culture

G. Neo-Communication
1. Characteristics
   a. Adaptability – seeing clearly in the kaleidoscope of culture and fast-moving business drivers; a balanced view of change (the yin and the yang)
   b. Social awareness – “…ability to pay attention, to listen and hear, to understand, to practice tolerance, to accept and, ultimately, to work in a more positive way for the common good.”\textsuperscript{58}

\textsuperscript{57} US Census Bureau, \url{http://www.census.gov/main/www/popclock.html} [April 8, 2007] The notion here is that the US represents cultural assimilation, but I doubt that to be true. Even if true, the US is but 5% of the world’s population.

c. Understanding of Context

The Context of Interest

- Socio-Political - Economic Forces
- Customer Forces
- Competitor Forces

Networks (e.g., logistics, transportation, information, financial, personal)

- Firm Infrastructure
- Human Resource Management
- Technology Development

Procurement
- Inbound Logistics
- Transportation

Operations
- Outbound Logistics
- Transportation

Marketing
- Marketing and Sales

Service

- Collaborator Forces
- Technology Forces
- Geodimatic Forces

d. Life long learning – “inspirational dissatisfaction”

e. Experiences learned in the world – “See one, do one, teach one.”

f. Skill in multi-sensory communications

"Communication is a combination of actions: speaking, writing, personal appearance, body language, appearance of documents, listening, observing, and questioning."

Inbound communication skills must be as strong (stronger?) than outbound communications skills

- Why are man’s senses the way they are (Darwin)

59 James Drogan, "The Context of Interest," vsd file [April 8, 2007]. This is meant to be an example of context. In this case it is applied to organizations wherein the global supply chain is critical to success.

60 Robert Neuschel, Director, Northwestern University Transportation Center.

61 From the medical profession.

g. Negotiation skills

IV. Actions

A. Socio-Economic-Political Driven Communication (Academic Movement)
   1. Letting the world as it is shape the required communication – relevancy is the key word
   2. Close collaboration between business and academia
      a. The Baruch Executive Student Partnership
      b. Field Center for Entrepreneurship: Zicklin School Of Business - Baruch College

B. Neo-Communication
   1. The star to steer by, but also a bridge too far

V. Miscellaneous Notes

A. “Looking at my own narrow field of programming-language design, my view is that a good language can be a major asset, but only when used appropriately and well. A language doesn't solve problems; it merely helps the expression of solutions.”

B. “Anything that helps people express their ideas makes a language better.”

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63 James Drogan, Bizz School Re-Thinking 6/19/5
65 Pontin, "Bjarne Stroustrup - the Problem with Programming."
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Channels, Audience Needs, and Communications: The Rise of an Idea

June 3, 2007

Introduction

The Seventh Annual Symposium of the Bernard L. Schwartz Communication Institute was held April 27 and had as its theme: "New Rules: Convention and Change in Communication." 67

66 This is, of course, just the working model. This was edited and produced in a larger size used in the plenary session of the conference. Presumably the version presented has found its way into the files of the Bernard L. Schwartz Communication Institute.

The value from these symposia is derived from the moderated discussion groups that, in principle, identify an issue in the morning and propose a resolution of the issue in the afternoon.

I was fortunate enough to be one of the moderators at Table 2. Jana O'Keefe-Bazzoni, Chair of the Department of Communication Studies at Baruch College was my co-moderator. Others at the table included:

1. Ginny Rudner
2. Martha Thomas
3. Jana Poazzoni
4. Fred Burke
5. Ben Rohdin
6. Suzanne Epstein

This note is about how this group arrived at Figure 15 The Sketch and, after some reflection on the day, what I think it may mean as an issue in communications.

The Morning Discussion

A list of questions intending to provoke discussion had previously been made available to the table by Mikhail Gershovich, Director of the Institute. Whether or not to use these questions was left to the table. Table 2 opted to consider the theme of the conference -- New Rules: Convention and Change in Communication -- as a hypothesis for discussion.

Did we believe the hypothesis to be true? What evidence could we offer to defend the position we took?

From my contemporary notes I've selected the following phrases that I think carried forward into the afternoon discussion.

1. Contact and connection (between parties in the conversation)
2. Generational gaps
3. Bidirectional communications
4. Power relationships
5. Not new rules, but new channels
6. Universal principles (audience knowledge, adaptability, technology shaping structure, multitasking)
7. Knowledge of what business wants
8. Mobility (of the employee)
9. Stable content, changing channels
10. Rules versus creativity
11. Culturally specific communications

I'm sure my colleagues at Table 2 would have different ideas as to the appearance of this list.

The Afternoon Discussion

After lunch and an opening afternoon speaker, both of which allowed time for the ideas from the morning to percolate in our minds, we returned to discussion. Its purpose was to delineate the issue and the manner in which the issue might be resolved.

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68 Baruch’s Zicklin School of Business is the largest collegiate school of business in the nation and knowing what the employers want seems critical to its success.
Table 2 was joined by additional people whose names, unfortunately, I didn’t record. My notes for the afternoon session are, in fact, completely contained in Figure 15 The Sketch.

The afternoon session was a fast-paced, ideas-on-steroids, give-and-take focused on identifying an issue and proposing approaches to resolution. While I've never speed-dated nor engaged in whitewater rafting, my sense is that these experiences had much in common with Table 2 at full throttle.

What began to emerge from the discussion was the need to describe a context in which to discuss the issue.

There are all sorts of ways in which one might describe the context for communication. A pretty thorough examination of these can be found in the video record of the afternoon plenary session for this conference.69

Our discussion of context focused on two dimensions.

I. Channels. This originally started as technology, but we felt this term was too confining.
   A. Channels are the “pipes” that connect those involved in the communication. Technology, as commonly understood, may or may not be in the channel.
   B. Most would agree that the number and type of channels has increased significantly in the last two decades.

II. Audience Needs.70
   A. It seems as if it would be axiomatic to use this phrase as a definition of one of the dimension of a context for communication. Indeed, the phrase was introduced early in the afternoon discussion and accepted without further discussion. However:
      1. We often interpret the audience as those out there beyond the footlights. Equally important, however, are those on the other side of the footlights. In retrospect this should probably be renamed participant needs.
      2. The participants increasingly include inanimate objects – things if you will. When things are all that are included in the communication, then maybe we can leave the communications aspects to the technologists. However, whenever a person is included we must not leave the communications to the technologists.

In both cases, channels and what I will henceforth call participant needs, a generally acceptable approach to characterizing and measuring these two dimensions, is required. I consider this a research need, but also full appreciate that these definitions may well have already been established.

One can then position a population of participates using certain channels and exhibiting certain needs within this context.

Suppose the following.


Why should we care about a depiction such as this? Population a can also be characterized by a set of knowledge, skills, and experiences related to communication. If becoming a member of population a is an ambition of students and the mission of educators, then we need to assure that the students are given the knowledge, skills, and experiences necessary to participate in that population. We, as educators, may not be prepared to teach this set of knowledge, skills, and experiences.

Malone\textsuperscript{71} of Reuters relates how she spent some 70 percent of her time instructing new hires from Baruch on the knowledge and skills required to participate in the population at Reuters. Now one data point does not make a trend, but questions are begged as to whether this is a good use of Malone’s time; whether this data point is symptomatic of larger issues in industry; and what, if anything, academia can and should do about it. I consider this another potential research issue.

If population a represents a target, then, by whatever means we used to determine population a we can determine a population b.

The gap is our responsibility, as educators, to find a way to cross. We may find that the results of this analysis of the gap requires changes in the curriculum (e.g., less structure in styles of communications), faculty (e.g., more accomplished practitioners) and different means of delivering the pedagogy (e.g., cellphone). Potential resolutions of these issues are likely research need.

\textsuperscript{71} Virginia L. Malone, Dean, Reuters Academy, Reuters America Client Training, New York.
As Table 2 was moving along two important contributions were made by Thomas and Burke.

Figure 18 Fundamentals

Thomas was particularly insistent that, for all of the focus on channels and audience needs, there existed a set of unchanging fundamentals upon which communications rested. Examples include critical thinking and structuring an argument. This suggests that whatever takes place in the context must be clearly linked to these fundamentals. Or, to put it more strongly, we ignore the fundamentals at our peril. A clear statement of these fundamentals may also represent a research need.

Figure 19 Adaptability

Burke suggested that the context is constantly in flux, buffeted by more-or-less independent changes in channels and participant needs. This says that the person who navigates the context needs to be adaptable. We characterized this as a SIDAL loop.\(^\text{72}\)

This need for adaptability strikes me as essential for surviving, thriving and making a difference in the current and emerging world. Identifying what is required to inculcate the capacity for adaptability on the student strikes me as an additional research need.

There are other important items needing to be mentioned in conjunction with this context.

1. Sensibility and usefulness. A diagnostic has been proposed above and needs to be vetted by business, the consumer of what we produce, and academia, the production function. Indeed, I would suggest that this vetting is the first amongst a set of research needs to be addressed. There is little point in proceeding with a faulty premise.

2. There are stakes (i.e., values) associated with each of the populations in the context and in crossing the gap (i.e., the transformation process is not without its costs). Ways need to be found to unambiguously identify these costs; another research need.

3. Recognizing where the action is in the context. The nature of change in the context suggests that “one look and done” is insufficient. Regular looks at the context, noting how the size and locations of the populations, the channels and audience needs change will be required. This leads into the notion of lifelong learning and the means whereby we may instill the passion for this in our students. Another research need.

Conclusions and Recommendations

The Seventh Annual Symposium of the Bernard L. Schwartz Communication Institute was held April 27 and had as its theme: “New Rules: Convention and Change in Communication.” Table 2 reckons that this hypothesis is true and is driven by the changes in the context first laid out in Figure 15 The Sketch.

The evolution of the context had been described in additional detail above. Table 2, in presenting the context, suggests that it is worth of additional investigation. Accordingly, research needs have been identified.

The teacher has two principle customers – the student and the organization that hires the student upon graduation. Surely the capability and capacity for effective and efficient communications is amongst that set of knowledge, skills, and experiences most highly prized by our customers. We need to assure we are delivering what our customers want.

James Drogan
Westport CT
June 3, 2007

Author Notes

1. The shape of this short paper began to take place almost immediately after the conclusion of the symposium. Its completion, for reasons that need not be covered here, was delayed for about a month. My recollection of all that went on and all the contributions made by others undoubtedly dimmed during that time. Omissions and mistakes in properly attributing the contributions of my collaborators at table 2 are regretted and I apologize for them.

2. I welcome any suggested amendments to this document.

3. While it may be obvious, let me restate that I have taken a teacher’s point of view herein.

4. Special thanks go to Mikhail Gershovich, Director, and Herb Brinberg, Chairman of the Business Advisor Council of the Bernard L. Schwartz Communication Institute; Elizabeth Busch, the symposium organizer; and especially Mr. Bernard L. Schwartz, whose generosity makes all this possible.
Bibliography


Managing the Business

February 1, 2008

Author’s Note: What follows are slides from a presentation representing a "minimalist" style. That is, black and white wherever possible, and minimization of words on the slides. The idea is that the information is conveyed by symbols and that symbols are easier to remember than words.
Seven keys to optimizing your workforce in a globally integrated world:

- Understand the demographics and capabilities of the workforce
- Predict future labor supply and demand
- Utilize social networks to increase the viability and application of knowledge across the organization
- Foster collaboration across traditional organizational boundaries
- Enable individuals to perform work regardless of location
- Drive the rapid development of skills and capabilities to meet changing business conditions
- Evaluate employee performance and provide appropriate feedback

(Copyright 2008 Career Systems International)
Being first means being first to dream, to dare, and to do.
To do not is to risk irrelevance.

A copy of this paper will be found at
http://jmsrge.squarespace.com/storage/Managing%20the%20Business.pdf
Ethics, Critical Thinking, and Communications

January 24, 2009

Introduction

"If you deliver good information you’re relevant."\(^73\)

It matters little how well we know a subject if we lack an ability to think critically about it, and effectively communicate the results of that thinking. Ethics underpin and are essential to being able to do these two things.

These three items – ethics, critical thinking, and communications – are essential if we are to resolve the issues that we confront.

The relationship of what I have so far mentioned is captured in this graphic.

![](image)

Figure 20 Relationships

This graphic exists within the context of the world around us; a world of constant and unpredictable change; a world changing with sometimes frightening speed; a world that, in some significant respects, seems to change not at all.

I write this note for two purposes.

1. To satisfy myself that my appreciation of the importance of the three items, and the way in which can think about and apply them is reasonable. Assuming satisfaction, then
2. To provide ideas for consideration to others, especially my students, on the subject in hopes they will find something of value they can pack in their survival kit.

While I make some points about the three major areas, the purpose of this is note is not give an exhaustive treatment of its three major themes. Others have done that. I want to focus a bit more on their interrelationship and sequencing.

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Ethics is that set of values that guides one in the conduct of life.

“Ethics is a major branch of philosophy, encompassing right conduct and good life. It is significantly broader than the common conception of analyzing right and wrong. A central aspect of ethics is "the good life", the life worth living or life that is simply satisfying, which is held by many philosophers to be more important than moral conduct.”\(^{(74)}\)

Ethics comprise the rules of execution for the SIDAL loop.\(^{(75)}\)

![Figure 21 SIDAL Loop](image)

Ethics controls what we sense, how we interpret the sensed, guides the decisions and subsequent actions, affects the process of learning, and the manner in which the behavior of the loop is modified.

Common sense tells us that there is not a single set of ethics that governs global behavior.

“Descriptive ethics is a value-free approach to ethics which examines ethics not from a top-down a priori perspective but rather observations of actual choices made by moral agents in practice. Some philosophers rely on descriptive ethics and choices made and unchallenged by a society or culture to derive categories, which typically vary by context. This can lead to situational ethics and situated ethics. These philosophers often view aesthetics, etiquette, and arbitration as more fundamental, percolating "bottom up" to imply the existence of, rather than explicitly prescribe, theories of value or of conduct. The study of descriptive ethics may include examinations of the following:

- Ethical codes applied by various groups. Some consider aesthetics itself the basis of ethics – and a personal moral core developed through art and storytelling as very influential in one's later ethical choices.
- Informal theories of etiquette that tend to be less rigorous and more situational. Some consider etiquette a simple negative ethics, i.e. where can one evade an uncomfortable truth without doing wrong? One notable advocate of this view is Judith Martin ("Miss Manners"). According to this view, ethics is more a summary of common sense social decisions.


Practices in arbitration and law, e.g. the claim that ethics itself is a matter of balancing "right versus right," i.e. putting priorities on two things that are both right, but which must be traded off carefully in each situation.

Observed choices made by ordinary people, without expert aid or advice, who vote, buy, and decide what is worth valuing. This is a major concern of sociology, political science, and economics.

Applied ethics is a discipline of philosophy that attempts to apply ethical theory to real-life situations. The discipline has many specialized fields, such as bioethics and business ethics.76

The ethics that governs our behavior at the Metropolitan Opera is likely to be different than that which governs our behavior at the New York Mets.

House and Javidan suggest to us that ethics is a function of culture.77

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**Figure 22 Dimensions of Culture**

Again, common sense suggests to us that this is true.

This, of course, complicates matters if we operate on a global scale. How do we apply ethics across the spectrum of cultures and situations?

"There’s no such thing as business ethics – there’s only ethics. People try to use one set of ethics for their professional life, another for their spiritual life, and still another at home with their family. That gets them into trouble. Ethics is ethics. If you desire to be ethical, you live by one standard across the board."78

But is that practical?

"When in Rome, do as the Romans do" advises people to adapt to the culture of places they visit. On the other hand, how do we square this advice with, for example, such US regulations as the Sarbanes-Oxley Act of 2002 and The Foreign Corrupt Practices Act of 1977 which may, in fact, prohibit acting as "the Romans do?"

I, for one, don’t see *uber ethics*. There is, as it were, no "one ring" to guide all ethics.

---


However, I don't believe we can leave it at that. One cannot be without ethics. There ought (must?) be a set of values that guides one in the conduct of life.

Ethics becomes a filter whereby we select those issues for consideration. In American business, for example, the filter is adjusted by custom and by law to exclude consideration of bribes. This is not the case in other countries.

The filter is under constant change depending upon the situation.\(^\text{79}\)

The tenor of this note so far has been one of personal ethics. Organizational ethics also exist. Consider the business configuration.\(^\text{80}\)

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\(^\text{79}\) The Information Awareness Office (IAO) was established by the Defense Advanced Research Projects Agency (DARPA), the research and development agency of the United States Department of Defense, in January 2002 in response to the September 2001 terrorism attacks in the US. This is an example of how the filter is shaped by events.

“Fundamental elements, or a set of beliefs which lie behind Corp as an organization (e.g., "Quality and safety are dominant principles in all we do," Respect for the Individual"). Other examples include the Nicene Creed and the Bill of Rights of the United States of America. Values should be simply stated, readily understood, and evident in the conviction, attitude and actions of all employees.”

IBM, for example, determined that its actions will be driven by these values:81

- Dedication to every client's success
- Innovation that matters, for our company and for the world
- Trust and personal responsibility in all relationships

I think it fair to say that IBM’s values not only determine what issues they will consider, but also the manner in which they will be considered. It is this idea that I have tried to depict in Figure 20 and Figure 23.

There is a considerable amount of additional material available from a variety of sources on the subject of ethics. Two of my favorites are (Costa) and (Maxwell).

**Critical Thinking**

Critical thinking is a well-established process for identifying and thinking about issues and is strongly related to the notion of systems thinking.

I imagine that I practiced this sort of thinking beginning in my childhood, received formal training in the subject at various times during my IBM career and, in 1992, attended a class taught by PDN Ltd. on the subject of consulting problem solving.

Special thanks are due PDN for their gracious permission to use material from their publication, Consulting Problem Solving.82

I had previously written a note83 on critical thinking. This note forms the basis of much of this section.

Time, by and large, has emerged as the frontline of competitive battles.

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82 Tim Reeder and Joanne Russell, eds., Consulting Problem Solving (London: PDN Ltd, 1990). Contact details for PDN Ltd. will be found in the appendix of this note.

Characteristics of problem solving in the business world.

- Time to solution is critical
  - "I believe that we’re about to witness what may turn out to be the last competitive frontier business will see. It's going to be a war over the one priceless resource. Time. And when it comes, trust may turn out to be the best investment anyone’s made."


- But
  - Problem definition can be imprecise
  - Data is not always available or relevant

- So, one needs some method of dealing with these divergent vectors

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**Figure 25 Characteristics of Problem Solving in the Business World**

Time draws one of the boundaries defining the space in which business decisions need to be made. In the early years of this millennium Establish/Herbert W. Davis Company said:

'Our mission is to use our knowledge of supply chain management and information technology to help companies achieve their business goals. In these past few months, we find that the definitions of short, medium and long term now mean something completely different:

Short term used to mean within the next six months. It now means "next Monday."

Medium term used to mean six months to a year. It now means "after next Monday."

Long term used to mean two to five years out. It now means "over the next six months."

That is to say the window available in which decisions must be made is continually becoming smaller.'

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**Global Positioning Systems**

Sophisticated, very responsive decision support systems are required to extract value from data that is more precise, accurate and frequently collected.

![Smaller and smaller decision windows](image-url)
Figure 26 Decision Window

The decision window comprises:

1. The event that occurs.
2. The recognition that the event has occurred.
3. The analysis of the impact.
4. The identification of alternative response to the event.
5. The selection of an alternative response.
6. The implementation of the alternative.
7. The trigger the alternative generates upon implementation. This can be thought of as a message that generates another event.

Time compromises the ability to execute these steps with confidence. Therefore, a way needs to be found to reach decisions within this constraint of time.

The business person needs a solution that is quickly arrived at, understandable, acceptable, and can be acted on.

- An undisciplined gathering and analysis of data is likely not to yield a satisfactory result.
- Rather, one should postulate the end result and then plan carefully to investigate and challenge the postulation or "hypothesis".
- Real job planning starts with hypothesis of what the answer is. Hypotheses provide:
  - A unifying concept
  - A point of departure for working backwards to establishing plans for fact gathering and analysis
  - A reference point for identifying and assessing the impact of shifts in the focus of the work
  - A basis for setting priorities

Adapted from PD, Counseling Problem Solving 1995, The Professional Development Network.

Figure 27 Planning the Resolution of an Issue

One cannot simply engage in data gathering without a purpose. Too much time is wasted and too much effort is ill spent.

Start with the end in mind. Determine the critical issues that need to be investigated to reach the end. Identification of the issues will bring to mind key hypotheses.
Figure 28 Hypothesis 1

It is these hypotheses that must then be investigated to resolve the issues.

Figure 29 Finding Hypotheses

Hypotheses emerge from a disciplined thinking process.

- What are the objectives of the assignment? For example,
  - Develop information providing a deeper understanding of a situation.
  - Provide information in a structure upon which decisions may be made.
- What is the nature of the output from the assignment? For example,
  - Computer model.
  - Oral presentation.
- What are the issues that must be considered? For example,
  - 8,000 TEU container ships cannot pass through the Panama Canal.
  - Common view of data.
- Then come the hypotheses. For example,
  - Booking containers to ships that can pass through the Panama Canal will minimize our transportation costs.
  - A system for the reconciliation of various views of data will be required.

84 Figure 27 through Figure 30 are based on Reeder and Russell, eds., Consulting Problem Solving.
Searching the Internet with the phrase "fact-based hypothesis-driven" will provide links to further information and different points of view on his approach to problem solving.

The question one, especially the novice, faces is that of understanding how to start the process of critical thinking. The PDN document does this quite well, but I'm not sure it's available in the public domain. However, an elegant little book, (Ellet), is available and I recommend it highly.

This section closes out with some comment the process of critical thinking based on my own experiences supplemented by relevant comment from Ellet.

One is confronted by an issue. For example, "Why is the percentage of on-time deliveries falling for deliveries of microinjected fallibies to customers in the upper reaches of Maine?" This may be all one knows about the issue to begin with.

Or one may have a more elaborate description of the case such as the 17 page case from the Harvard Business School, "TNT Ltd.’s Logistics Services in Asia (A): The Strategy."

Or, if one is faced with the issue of merger and acquisition, all relevant documentation from a firm.

Ellet says,

"Case study students need two distinct sets of skills. First they need to be able to analyze a case, to give it meaning in relation to its key issues or questions that have been asked about

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The goal is to come to conclusion congruent with the reality of the case, taking into account its gaps and uncertainties. Second, students have to be able to communicate their thinking effectively.  

To that I would add that a dose of healthy skepticism combined with curiosity is also a good thing. One ought to want to get beneath the surface of the case, to find out what's really going on (the root causes).

![Figure 31 The Initial Reading](image)

The initial reading of the data and information in the case leads one to a list of facts, inferences, and assumptions. Keep in mind that relevance is important. The desired outcome and the context should serve as filters.

Read with a pen or pencil and paper at hand. Write everything down.

Now about The Missing.

"Is there any point to which you would wish to draw my attention?"
"To the curious incident of the dog in the night-time."
"The dog did nothing in the night-time."
"That was the curious incident"  

Be aware of what, in your experience, is important in cases such as this, but is not mentioned. Your ability to do this comes with experience, but the lack of experience should not prevent you from asking, "Why is nothing said about...?"

Write everything down.

Then read the case again.

This first step is arguably the most important. Without a clear understanding of the case and the desired outcome then the odds that the subsequent effort will yield a result of value become smaller.

![Figure 32 The Initial Analysis](image)

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The initial reading will produce “pieces of the puzzle.”\(^{88}\) These pieces will 1.) likely not be sufficiently complete to produce the desired picture, and 2.) likely include pieces that seem to have no part to play in producing the desired picture.

From this set of “stuff” one begins to build a meta-structure to guide one’s thinking. This meta-structure comprises:

1. Issues: These are items the understanding of which is likely to likely to be of significance in producing the desired outcome. For example, suppose the situation being investigated is the potential for growth in a particular market. Issues might include buying behavior, or disposable income, or the age of the population.

2. Hypotheses: These emerge from the issues and are provisional statements that could account for the relevance of the issues. An admittedly simple example of a hypothesis is that the lack of disposable income will result in low market opportunity.

3. Questions: These are intended to prove or disprove the hypotheses. For example, what is the relationship between disposable income and market opportunity?

What we’re looking for are items and relationships that are relevant to producing the desired outcome.

![Figure 33 The Initial Outcome](http://www.theinventioneers.com/Puzzle%20Pieces%20from%20The%20Inventioneers%20smaller.jpg)

One cannot and must not analyze forever. The sponsor of the case is expecting an outcome. This usually consists of two parts:

1. Conclusions: Think of these as hypotheses that have been proven to be significant. For example, the unexpected gain in weight is due to the consumption of two gallons of Eddy’s Butter Pecan ice cream per week. Your sponsor will also be looking for ideas on the risks and rewards associated with not resolving the hypotheses.

2. Recommendations: Here is where you answer the question of what should be done next. Think in terms of what, who, how, why, when, and where. Again, risk and rewards need to be considered.

There is an implication in foregoing that the pass through critical thinking is linear and perhaps even one pass and done. This is far from reality.
Figure 34  The Whole of Critical Thinking

In Figure 34 I have brought the parts previously discussed together. The process of critical thinking creates new data, information, and knowledge. The new informs the old in the sense that one’s view of, say, the initial set of data and information may change. This is represented by the feedback loops introduced into this diagram. In certain situations, even the desired outcome and context can be changed by the growing understanding.

That is, critical thinking is an iterative process.

Your look at a case needs to consider the importance of time. For example, an issue of significance today may not be of significance tomorrow regardless of whether or not any action is taken by the sponsor. Perhaps, therefore the issue can, with little risk, remain unaddressed. Give consideration to analysis within a relevant life span.

Ethics needs to underlie and inform all of your work on the case. For example, in certain situations, especially in America, questions regarding gender and age are unacceptable.

I’ve already referred you to (Reeder and Russell) and (Ellet) for additional information on the subject of critical thinking. Inasmuch as critical thinking is closely related to systems thinking I also want to refer you to (Sterman) and (Senge). A small note I use in my system design and control course, "An Introduction to System Design and Control," may also prove to be of some value.

Communications

The ethics are impeccable and the critical thinking without equal. Now comes the third, equally hard, and perhaps most important undertaking – communications.

Your work has been synthesized into a set of conclusions and recommendations. You now have to choose what and how to present this material to the person initially requesting that you look into the situation.

What do you do?

All Work
- Conclusions
- Recommendations

Audience informs on

Figure 35 Producing Results

The task is to cause the desired audience reaction from the communication of your conclusions and recommendations.

How do you wish the audience to react? Oft times we are looking for action. Funding for a project, say, or a high grade in a course, or the stimulation of debate, or maybe the forestalling of action.

One needs to be quite clear as the desired outcome for it shapes what (content) will be communicated and how (style).

It's necessary that you have a very good understanding of the audience; their likes and dislikes, agendas, power and influence in the organization, allies and enemies. The audience informs you as to what should be selected from your portfolio of work and how it should be presented. It's helpful if you can find examples of work authored by your audience to use as models for your presentation.

The effort has, in all likelihood, been conducted by a team. Tasks have been assigned, independent work has been done, but the communications of your results should have a structure and consistency that integrates all into a seamless whole. My advice is that, if you are required to give an oral presentation it should be done by a single person – your best speaker – unless there is a really good reason to do otherwise. If producing a written report, the final edit should be done by your best writer. You don't wish your audience to spend effort adapting to multiple styles.

Keep in mind the following principles for communication:

1. The grammar and syntax is understood.
2. The information communicated is relevant.
3. The medium of communication is acceptable.
4. There is a desire to communicate.
5. There is confirmation of understanding.

If you use graphics, pictures, tables and the like, be sure they are relevant to your argument and, if in written communication, fully supported by the surrounding narrative. Avoid graphics, pictures, tables and the like, as well as elaborate formatting, if these do not contribute to understanding. The audience is not interested in fancy wrapping paper, but the contents of the package.

Understand and respect limits set by your audience. For example, if you have 20 minutes to make an oral presentation, stay close to that; if 25 pages have been allocated for your report, stay close to that.

Learn to read your audience when making an oral presentation. This read will tell you whether or not you have captured their attention. If you haven't, then you need to change. I one time had a colleague write me;

“If no one else will compliment you on your presentation, I will.

It took most of the morning and was about what we expected of you.”

Find examples of written reports and oral communications that have worked well. Study them and learn.

Be cognizant of the potential for cultural issues to arise in communications. Words, gestures, colors, and graphics that may seem innocuous to you may well be received in a different manner by your audience.

I have found the output of Project GLOBE\textsuperscript{90} \textsuperscript{91} instructive on these manners. Think of the implications on communications of the dimensions of culture and cultural groups as defined by Project GLOBE.

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\textsuperscript{90} Javidan and House, "Cultural Acumen for the Global Manager: Lessons from Project Globe."

A further look at the culture

### Dimensions of Culture
- Assertiveness
- Future Orientation
- Gender Differentiation
- Uncertainty Avoidance
- Power Distance
- In-Group Collectivism
- Performance Orientation
- Humane Orientation

### Cultural Groups
- Anglo
- Arab
- Confucian
- East Europe
- Germanic
- Indigenous Africa
- Latin America
- Latin Europe
- Nordic
- South Asia

---

**Figure 36 Project GLOBE Summary**

Ours is a world where globalization is an increasingly powerful force. To ignore it is to put ourselves at an unnecessary disadvantage.

Generational issues may also arise that affect the communication. For example, consider SMS (Short Message Service) versus E-Mail. Based on experiences at the *Executives on Campus Freshman Seminar for Learning Communities*, Baruch College, October 2006, it was clear that Baby Boomers were comfortable with e-mail while Millennials were comfortable with SMS. I refer you back to the first item under principles of communication on page 65 for additional guidance.

Your task is to find a way to communicate with your audience at the level they will understand. Business communication is different from academic communication. Rarely did, or do, I find business communication written in the style of academic theses and dissertations.

Ethics, as mentioned several times before in this note, should also underlie your communications.

Other than (Reeder and Russell) and (Ellet) I have few books in my library that deal with communications. There is, however, an enormous amount of material available that deals with this issue. For example, a google of “business communication” made while writing this note turns up a bit over 52 million hits on this subject.

Review what businessmen and women are reading. How does the Wall Street Journal, or Barons, or the Financial Times present information? What are the best selling business books and how are they structured? Who are people in demand in the business community as speakers and how do they practice their craft?

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92 James Drogan, 1. Introduction to the Course and to International Physical Distribution Systems, ppt file, [April 15, 2007]

Coda

This has been a quick, high-level journey through ethics, critical thinking, and communications.

Rather than an in-depth treatment of each of these matters I have focused more on their interrelationship and sequencing. I’ve also brought into play my experiences and pointed you towards other sources.

My sense is that if one lacks knowledge, skills, and experience in ethics, critical thinking, and communications, then other qualities one may possess may be seriously compromised.

James Drogan
January 24, 2009
Appendix
Contact details for PDN Ltd.
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Bibliography


Musings on the State of Communication

April 1, 2009

A number of things -- some funny, some serious -- on the subject of communications have come my way over the last few days.

The first is from the March 29 edition of the New York Times. I suppose one might call it "The Descent of Man."

![Cartoon of communication evolution](image)

I’m also reminded here of the Seventh Annual Symposium on Communication and Communication Intensive Instruction sponsored by the Bernard L. Schwartz Communication Institute at Baruch College, April 27, 2007. The theme was "New Rules: Convention and Change in Communication." My preparatory notes for this conference can be found here.

Related to the mention of Twitter in the above cartoon is the ext item, an IT Conversation, "Scott Lemon - TopFollowFriday," regarding the growth and use of Twitter. There is a lot of technical language in this podcast, but listen carefully for hints of change in the manner in which people communicate.

This third item popped up on g-mail this morning.
Today is, of course, April Fools' Day and this is a bit of a spoof on the powers of google. On the other hand, it may not be too far from the truth. In my family we call these sorts of things "caboose stories," that is, an untrue story containing a certain amount of plausible truth.

The last item is a podcast by Susan RoAne, "Face to Face."

"Susan RoAne, author of the book Face to Face: How to Reclaim the Personal Touch in a Digital World, talks to Moira Gunn about how basic conversational and social skills have deteriorated. RoAne's book offers simple steps to more effective communication."

RoAne suggests that digital communication, by its very nature, considerable narrows the communication bandwidth and is, in some situations, inappropriate. I agree. There have been times when I have walked from one end of campus to the other to have a face-to-face conversation. She brings out things to think about.

Posted on Wednesday, April 1, 2009 at 05:44PM by James Drogan | 1 comment

Reader Comments (1)

A poignant irony in that O'Keefe works for the x-town rival of the defunct Rocky Mountain News. One of the oldest Western papers, a goto for decades and now a "fossil".

But like a lot of dinosaurs the problems were not just the asteroid strike but a refusal or unwillingness to adopt and adapt. Or at least a lack of capabilities.

April 7, 2009 | dblwyo
The Digital Bubble

April 7, 2009

One of my students has written the following in response to the question of what to do when technology fails.

"Michael says, "Once the systems are down all we can do is wait until they are started back up." I don't know about all of you, but I often find a moment of peace when this happens.

I was travelling for work today and was driving through the Adirondack Mountains in Upstate New York. I spent about an hour without cell phone coverage. My employees need to regularly reach me by phone on and off through the day, but for the most part it is not a huge emergency if they cannot reach me for a limited time. I actually had time to think about what I wanted to think about, whether it be how beautiful the tops of the mountains looked with snow, or to formulate priorities for when I reached my office.

Of course when I popped back up I had phone messages, and then a period of time where there was much phone activity to get caught up. This still may qualify as a failure of technology, with a recovery period, but it is limited and planned. The system still moved forward, even if there were slight delays in answering a specific inquiry.

I guess my point in all this is, sometimes a technology "failure" need not be a "bad" thing, and further it might not be so horrible to take back control of the technology, at least in limited doses. You don't continuously have to have access to the internet at night when you go to sleep. You can shut off your cell phone once in a while when you go to lunch, or if you are in an important conversation or meeting and want to control the amount of distractions that may come up. As with other aspects of life, balance is always important.'

I am reminded by this student's words, recent experiences of watching people walking on the streets of New York City, and the e-mail streams that I find myself swimming in that we seem to increasingly, willingly or unwillingly, find ourselves in a digital bubble. In this bubble we are more-or-less oblivious to much of what goes on around us.
Like a blind person, our senses are reduced to what we can touch with our DSD (digital sensing device). We miss much of what is going on in life even though we may sense things in a new and more powerful way with DSD.

It becomes a question of breadth and curiosity, on the one hand, and depth and isolation on the other.

How does something like this make it into the digital bubble? Well, you might say, the same way this picture made it into this post.

I contend, however, that in this digitization much of the message of the moment is lost. In the move towards expediency we have moved away from the experience.

We are, in some significant ways, ill-served by the digital bubble. Being over protected from the full panoply of the world's sights, sounds, smells, tastes, and touch we compromise our ability to build a sensory immunization system; we limit our ability to build ethical, critical thinking, and communications skills. We're safe in the bubble, but left at sea when the bubble bursts.

Always on, always connected, and always transmitting. I wonder whether, in the long run, this is a good thing.
December 27, 2009
Re: Conversations with Dave

Early on in my second career as an acedemician I suggested to an ethics seminar that ethics were too important to be left to an ethics class. In March of 2007, as the Closing Speaker at the CUNY Conference on Academic Integrity, I reaffirmed my position. I've subsequently taken the same position on matters of critical thinking and communications.

I'm inclined to say the same of humanities.

There are certain themes (e.g., in addition to those mentioned above are culture and corporate social responsibility) that ought find their way through all of our instruction (e.g., logistics). I'm arguing that such themes and their effects are easier to understand when placed in the context of value-adding activities that advance the general health of the world.

Following this argument then, we should be less concerned that humanities justify their worth then that other disciplines underscore their worth through the injection of, say, humanities. I'm not suggesting here that we should devalue humanities, but rather we should interpret them in different contexts thereby enhancing their value.

The fabric of the whole man comprises several threads. The warp and woof of these threads suggests a pattern that grows increasingly complex through the generations. We, whether teachers or parents or mentors or executives, ought to seek and accept responsibility for helping the man (or, of course, woman) weave this new fabric.
I have been asked to serve as one of several facilitators for Tenth Annual Symposium on Communications and Communications Intensive Instruction sponsored by the Bernard L. Schwartz Communication Institute at Baruch College. This is an honor that has been accorded me before. My prior habits have been to prepare a preparatory note to help me in the facilitation process (James Drogan, 2006a, 2007c, 2008, 2009b). Occasionally, these conferences have produced documents exploring the theme in greater detail (James Drogan, 2006b, 2007d).

This note, then, is in preparation for the tenth annual symposium.

The introductory graphic to this paper is displayed in a larger form in the appendix to this document. My typical approach to preparing for a theme is to use mindmapping software to sketch and refine my ideas. The resulting map then becomes the outline for the paper.

**General Idea**

The general idea to be followed rests upon considering the impact on the principles of communication change since the first symposium.

1. The grammar and syntax of the messages being exchanged are understood.
2. The information communicated in the messages is relevant.
3. The medium of communication is acceptable.
4. There is a desire to communicate.
5. There is confirmation of understanding.

This consideration resulted in the branch in the diagram labeled *The Yin and the Yang of Ten Years of Change in Communication*. This paper will take up each of the sub-branches in more detail.
A second major consideration was more philosophical. What is communications for? This leads to three sub-branches which will also be taken up in more detail in the next section this paper.

**Philosophy**

The international relations theorist Robert W. Cox has written, "Theory is always for someone and for some purpose" (Cox, 2004, p. 752). The same is true for communications.

One other point to mention before continuing concerns the motivators of communication.

Four come to mind.

1. To be polite.
2. To attract attention.
3. To inform.
4. To prompt or forestall action.

The other thing that strikes me as important is consideration of whether the communication is push (communicator is dominant) or pull (audience is dominant) (James Drogan, 2009b).

My view is that communications as part of a larger philosophy: to pay attention, to listen and hear, to understand, to practice tolerance, to accept and, ultimately, to work in a more positive way for the common good. Communications, at its ultimate, leads to action culminating in an increase in the common good. This philosophy, however, is subject to three questions.

What do recent and presumed developments in communication portend for this philosophy?

Perhaps I am influenced by my approaching dotage, but developments in communication seem to severely test the philosophy sketched above. There are exponential increases in communications momentum (mass of stuff times the velocity at which the stuff arrives) that suggests a communicator dominant world where it is increasingly difficult to pay attention, to listen and hear, to understand, to practice tolerance, to accept and, ultimately, to work in a more positive way for the common good. Advertisements everywhere; bobbled-headed, blabbering would-be boffins assault our senses at a rate of speech approaching the speed of sound; the noise gathers, the silence retreats, and we seem to be swimming upstream in intellectual effluent. The news has become opinion. The irrelevant has transcended the important. And Diogenes has again come forth with his lamp.

The issue here, it seems to me, is whether developments in communication have compromised our ability to think, on the one hand, and on the other, compromised our ethical sensibilities. Have we really thought through the consequences of our encouragement of the latest in communications practice and technology?

I am no Luddite, but I have a long background in the field of technology and I can appreciate the dangers of techno-lust. I am simply urging here that we not lose sight of why we communicate and it's the quality of the outcome of the communication we should have foremost in our mind, not how many blogs we have or tweets we produce.

What roles do the sociological, economic, and political languages play in communications?

The phrase “China is a currency manipulator” is loaded with sociological, economic, and political overtones that generate different responses from different people at different times. It’s not clear that these responses are planned for, anticipated, or even completely understood. It seems to me that there is a potential for a collective response that nullifies the intent and potential value of the communication. “Will it play in Peoria?” is not enough. In a globalized world the message will likely need to play in multiple venues.

Perhaps there is a danger in our instruction that our communication instruction neglects to consider the impact of these other languages. Communications as taught in American educational institutions is not the only way of communicating effectively and may likely not be the most effective way.

How are communications affected by cultural factors?

GLOBE is a multi-phase, multi-method project in which investigators spanning the world are examining the inter-relationships between societal culture, organizational culture, and organizational leadership. Approximately, one hundred seventy social scientists and management scholars from 61 cultures/countries representing all major regions throughout the world are engaged in this long-term programmatic series of cross-cultural leadership studies (“GLOBE,” 2010).

In short, this study is about the manner in which culture and society affects decision-making within the organization. Decision-making is manifest in action and results and is the result of communications. The manner in which a decision maker effects action is likely to change across the ten cultural communities identified by Javidan and House. To what extent do these cultural considerations inform our instruction in communication? I suspect the answer is not as much as perhaps they should.

I used the following words in my closing comments to the 2007 CUNY Conference on Academic Integrity.

Here is a provocative question. Do American ethical values help or hinder in developing the world? We talk very much about how international students come to America. There is an implication in our discussions that we think they will stay here. A lot of my students don't. They go somewhere else for their careers. So we teach them a certain set of ethical values that may not really apply to their particular situation. We ought to be somewhat sensitive to this particular issue (James Drogan, 2007b).

Substitute “communications skills” for “ethical values.” The caution I suggested in 2007 applies today in the context of communications instruction.

**The Yin and the Yang of Ten Years of Change in Communication**

**Yin**

Exponential increases in communications momentum leads to shifting more time into management of information and less on developing knowledge from communication.

Communications momentum is the product of the mass of communications and the velocity at which it arrives. Few would argue against the exponential growth in communications momentum.

The graphic (“Twitter’s Growth Still Accelerating,” 2010) to the left charts the rise in activity on Twitter.

I very much doubt that this behavior is unique. Think, for example, of what is happening in one’s personal or work e-mail space.

Through the portal that connects one with cyberspace gushes an enormous amount of flotsam and jetsam amongst which lie the pearls of meaningfulness. The trick then, is find and create value from the pearls. This – filtering, categorization – becomes an increasingly time consuming task.

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94 I would be very much in favor of banning all Reply All buttons from all e-mail systems.
In the context of a SIDAL loop (adapted from Haeckel & Slywotzky, 1999), energies begin to congregate towards sense and away from other critical aspects of the loop.

In *Homer, Great Books and Modern Life* (James Drogan, 2006c) I provide some thinking on how to deal with this growth in communications momentum.

**Capacity mismatches between communications and cognition**

The immediately prior “yin” is, as you might expect, closely related here. Our cognitive capacity does not grow at the same rate as communications momentum. I have something to say about this in *Homer, Great Books and Modern Life*. I will also return to this matter in the section on Yang (see *A picture is worth a thousand words becomes real*).

**The rise of the neocommunicators**

I first gave some thought to the idea of neo-communications in my preparatory paper for the Seventh Annual Schwartz Symposium ("The Seventh Annual Symposium on Communication and Communication-Intensive Instruction," 2007). There was, is, and will continue to be the rise of neo-communications practiced by neo-communicators (e.g., my 16 year old granddaughter) who can keep several simultaneous communication streams going concurrently with confidence and comprehension.

A quick glance at the graphic (Schill, 2008) to the left tells us that there are more neo-communicators than there people like me, aka paleo-communicators.

Does that portend a widening communications gap?

**Decrease in the need to confirm understanding**

I’m thinking in particular here of Facebook and Twitter. I would characterize the preponderance of the communication via these two systems as push and, in several ways, in contravention to the principles of communication on page 77. There is no *a priori* consideration of relevance or *ex post* assessment of understanding. One is left to wonder about the amount of bandwidth consumed by the human in flogging communications that lacks relevance.

**Multiple personas**
The communications of the day provide an opportunity for one to have multiple personas (e.g., button down, cool dude). Perhaps the risk being run here, perhaps more often than we might realize, is who is the real you? For example, from time to time I sit on search committees. One of the first things I do is to search the Internet using the candidates’ names. Suppose I find the “cool dude” when the candidate was presenting himself as “button down.” I now have a potential clash that I must deal with. Or should I? Should I just accept the picture the candidate is presenting to the search committee? Is what I have done inappropriate, an ethical *faux pas*?

**Small decision windows**

For some time I have argued that decision windows⁹⁵ are growing smaller. The amount of work needing to be completing not only grows (e.g., the effect of communications momentum), but the processes (e.g., SIDAL, page 80) for completing the work need to be completed in a shorter period of time.

These effects represent a strong force shaping the design, implementation, and operation of the underlying business system.

The impact on the business system is an area that requires more examination. For example, how does one effectively move the Twitter stream through the SIDAL loop?

**The intrusion of authority**

Modern communication systems provide more opportunity for authority to intrude upon developments than heretofore possible. It is doubtful that *Total Information Awareness* (“Information Awareness Office,” 2010) would have emerged an early 2002 without the development of tools and techniques associated with modern communications and, most importantly, new ways of thinking about acquisition, analysis, and interpretation of information.

The Ninth Law states, “Once it’s out there, it’s out there” (J. Drogan, n.d.). We need to be conscious that every time we create a new login, every message we deposit into cyberspace results in more stuff “out there.” Perhaps we would rather not have it “out there.”

Always on, always connected, always transmitting; is this a good thing?

I had previously raised this issue (James Drogan, 2003) and blogged about it (James Drogan, 2009a).

Face-to-face has moved through voice-to-voice to bits-to-bits, narrowing the range of communications (i.e., 1,000 unread e-mails)

By range of communications I mean the totality of the communications channels open to us. For example, in face-to-face one reads body language and in voice-to-voice one reads tone and inflection. Both channels are missing in the form of digital communication most of us use most of the time – text. Consequently, the communication bandwidth is narrowed and we consequently have a narrow view of a situation.

Most of the time this is by accident. Sometimes, however, it is by design.

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⁹⁵ A decision window opens when an event occurs and closes when the outcome can no longer be changed through intervention. The decision window available to batter in major league baseball is, for example, about .5 second (“Timing,” 2007). See *Managing the Business* (James Drogan, 2007a) for further examination of this issue.
Patterns

This issue was raised by a recent new item regarding Facebook. “We're building towards a web where the default is social - every application and product will be designed from the ground up to use [people's] real identity and friends” says Mark Zuckerberg, chief executive (Nuttal, 2010). The concern I have here is that patterns of behavior that may include other, perhaps unsuspecting people, become easier to discern and to exploit in legal and illegal, ethical and unethical ways by well-meaning and not so well-meaning people.

Concluding the Yin

The last ten years of communication have brought a rather by-design and by-chance interwoven sets of risks and rewards, opportunities and threats, strengths and weaknesses, transparency and opaqueness that, if not representative of anarchy, border on anarchy. In many respects we have been seduced by the siren call of always on, always connected, always transmitting.
References


Appendix

Because of the size of the diagram it has been broken into three parts.96

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Figure 38 First and Second Levels

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96 The mindmap was created using Joerg Mueller’s Freemind available at http://freemind.sourceforge.net.
Figure 39 The Yin and the Yang

Communications are part of a larger philosophy to pay attention, to listen and have an understanding, to practice tolerance, to accept and, ultimately, to work in a more positive way for the common good.

What does current and promised developments in communicative practices for this philosophy? What role do the sociological, economic, and political languages play in communications? How do communications affect cultural factors?

The Principles of Communication

Yin Branch

Yang Branch

Figure 40 Top Branch
Abstract

It ain't what we don't know that hurts us, it's what we know that ain't so."

"We also study Cisco. What comes through from our class discussion is that Cisco thought they knew it all and had no need for corroboration. The conflicting data was available; they chose not to look at it."

"I have no data yet. It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts."

Here we have three of several issues associated with data, information, and knowledge.

1. Data that does not represent truth.
2. Hubris of thinking we know all we need to know.
3. Succumbing to the temptation to make a decision before the relevant data is in.

This note takes up a general set of considerations regarding data management.

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97 Mark Twain
98 James Drogan, "Lean SCM vs the Crisis," e-mail to David Livingston et. al., May 19, 2009
99 (Doyle)
Data, Information, and Knowledge

Data, information, and knowledge are not identical.\(^{100}\)

Figure 41 The Difference Between Data, Information and Knowledge

Some points:

1. Data is a prerequisite for information and information is a prerequisite for knowledge. This places a premium on the correctness of the data. Data are attributes of objects (e.g., age of a person, location of a shipment).

2. The cost of acquisition of data and subsequent development of information and knowledge increases as one moves from the left to the right in Figure 41.

3. The value of decisions made on the basis of data, information, and knowledge increases as one moves from the left to the right in Figure 41.

4. Human involvement in an information system increases as one moves from left to the right in Figure 41.

5. The skills and experience required of the human to be an effective participant in an information system increases as one moves from left to the right in Figure 41. The apprentices are to the left, the adepts to right.

Relevance

Consider the following sequence:\(^{101}\)

1. What business decisions must be made and why? Here we are seeking to write declarative sentences that look something like "We need to make a decision about ... because it will affect how we ..." These need to be decisions of significance to the firm.

2. How will these decisions be made and why? By how I mean the general approach to making the decision. For example, a decision on which container to move next will be based upon a) the value of the goods to the shipper and 2) the value of the shipper to the organization. It's useful to also write declarative sentences to help answer these questions.

\(^{100}\) (Drogan 2006)

\(^{101}\) (Drogan 2005a)
3. What data is required and what will be its source?

Relevance is a measure of the ability of the data, information, and knowledge to support the process for making decisions.

1. Is there a strong relationship between the data, information, and knowledge and the process for making the decision?
2. Is the data, information, and knowledge available within the decision window?

The Decision Window

A few words are in order regarding the decision window.¹⁰²

![Decision Window Diagram]

Figure 42 Decision Window

The decision window is opened by the initial event and closed by the resulting outcome. Any intervention to change the outcome must come within this window. The windows continue to grow smaller due, I think, to the ubiquitous of data, information, and knowledge; pervasive global communications (always on, always connected, always transacting¹⁰³); the speed at which business is conducted; and, last but not least, the embracing of risk and uncertainty as representing opportunities for competitive success.

I include here a portion of the contents of an e-mail exchange on this subject which may shed additional light on my thinking.¹⁰⁴ The original material is in italics. I have added additional explanations into the original e-mail in regular typeface.

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¹⁰² (Drogan 1999a)
¹⁰³ (Drogan 2003)
¹⁰⁴ J. Drogan to D. Livingston, RE: Homer, Great Books and Modern Life, e-mail, December 28, 2006
In this case I’m suggesting that an investment in time/effort results in the acquisition of knowledge and a subsequent return on the investment through the actions predicated on that knowledge. The greater the investment, the greater the knowledge acquired, and the greater is the expectation for return.

The return line is anchored at the origin and rotates counterclockwise or clockwise depending upon one’s capacity (greater or lesser, respectively) to absorb and internalize the knowledge. The length of the line is a function of the commitment one makes to the investment. Lifetime learning is represented by long lines.

One could, I suppose draw, at worst, a horizontal line indicating the level of knowledge required to resolve certain issues. At best, I suspect this line probably rises as one goes from left to right. The three box model for describing a supply chain was satisfactory at one time, but the five box model is to be preferred, and someone has had had the temerity to suggest five is not enough.

The investment line suggests that there is a limit (one cannot invest an infinite amount for an indefinite time) to the amount of investment that one is willing (boredom arrives) or able (the decision window has closed; investment is no longer available) to make.

In the second case, external forces are tending to push the limit set by the decision window to the left. Unless one changes the return line one will, over time, have less and less knowledge available to resolve increasingly complex issues. I think the decrease in the size of decision windows is an unstoppable force. The only thing that one can do to cope is to rotate the return line counterclockwise.

Hence, what we need is to find a way to rotate the return line counterclockwise. I understand the line may shorten (an implication to be worked through later).

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105 The three box and five box models are supply chain descriptions. I have suggested that the five box model is insufficient.
I see only two ways to do this. Improving the K-12 educational system, at a minimum, but also extending this to improvement into higher education (at least to the Masters level). We have discussed this at some length.

The second way is to improve collaboration. Technology helps here, but there is also a change in mind set required. My experience is that you can dump a lot of pretty smart people into the SIDAL [Sense, Interpret, Decide, Act, Learn] process, but they will not necessarily form a high performance team. The notion of collaboration ought to be on our discussion list.

Oops, a third way pops up. Increase the return by focusing only on relevant knowledge. That, of course, is what fact-based hypothesis-driven reasoning is all about. And this calls into question the value of the Great Books (this alone ought to provoke some sort of response from you). Eruditeness may, in fact, be a burden in the future world. On the other hand, those that traffic in imagination, to whom you refer in the last part of your note, may be of great value.

As to the matter of boredom, the option here is to find a way to make the seemingly boring actually exciting. That’s what good teachers are all about. I think we can agree we have too few of these.

However, I think there is and will always be the need for the person that understands the picture to be made from all the little pieces. Where are they to be found? How are they to be nurtured and retained?

Maybe Homer and Great Books do not fit with Modern Life. This may be seen as in opposition to what I have often maintained prior to this note. Indeed, I think it may well be. If Homer and the Great Books can be considered as representative of the knowledge of the person that understands the picture to be made from all the little pieces, then I what I am leading towards is this person as the composer, orchestrator, and maestro (COM; acronym is required because I sense I’m going to come back to this idea). We need more of these.

And we need the members of the orchestra, the specialists, for which Homer and the Great Books are not what is required.

Now the following should come as no great surprise.

Over time, as technology and our understanding of collaboration has developed, the COM (the single box) can direct an increasing number of specialists. Collaboration is not represented, in my mind, by blogger babble, but rather by such things as open source and

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106 (Hackman 2002)
Wikipedia. The COMs must understand and must apply Homer and Great Books while the specialists should be content with the Red Books (IBMese).\(^{107}\)

What seems so straightforward, blissful even, is set upon by culture, Maslow’s Hierarchy, myopia, and all the related diseases that hinder our ability to pay attention, to listen and hear, to understand, to practice tolerance, to accept and, ultimately, to work in a more positive way for the common good. There are, as you have often pointed out, cures for the diseases if only the patients will be willing to take the waters.

So there you are. It’s all about incentive. Unfortunately, incentive generally arrives when one is under duress (think IBM in the early 90s). In the pace of today’s and tomorrow’s world that may well be too late. It becomes harder and harder to get on top and stay on top of the wave. I’m pretty sure that we in higher education are not dealing with this as effectively as we ought.

All this does not, in my mind, obsolete SIDAL.

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By Red Books I meant specific, detailed expertise.

Drogan’s First Law: Know what you know, know what you don’t know, and know who knows what you don’t know.

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\(^{107}\) By Red Books I meant specific, detailed expertise.

\(^{108}\) Drogan’s First Law: Know what you know, know what you don’t know, and know who knows what you don’t know.
Finding the Knowledge Kernel

By “knowledge kernel” I mean the set of most appropriate data, information, and knowledge.

Figure 46 The Amount and Effectiveness of Knowledge of Technology

Figure 46 captures this notion. To the left of the mean lie the less qualified, to the right the over qualified. Subject to certain forces (e.g., planning and control levels, function responsibilities, to be discussed below, and time) the knowledge kernel changes. In a sense, what got us here will not keep us here.

The required knowledge kernel (used hereinafter to mean data, information, and knowledge) is defined by breadth, depth, and currency.\textsuperscript{109}

\textsuperscript{109} This section is taken from (Drogan 2009).
Breadth, Depth, and Currency

The level of knowledge one requires is commensurate with one's role and responsibility in the organization. One determinant of role and responsibility is the planning and control level.\textsuperscript{110}

These three levels of planning and control, and decision, exhibit different characteristics.

- **Strategic**
  - Objectives and policies
  - General and functional management
  - Long-range concerns
  - Widely varying problems
  - Data is in the form of parameters and estimates, difficult to define, external to the business.

- **Operational**
  - Efficient execution of policies
  - Assessment of the effectiveness of policies
  - General, functional, operational management
  - Medium-range business decisions
  - Problems are more structured, specific, and repetitive
  - Data is definable, detailed, and generated internally.

- **Tactical**
  - Efficient execution of policies
  - Assessment of the effectiveness of policies
  - General, functional, operational management
  - Medium-range business decisions
  - Problems are more structured, specific, and repetitive
  - Data is definable, detailed, and generated internally.

**Figure 47 Planning and Control Levels**

Towards the top of this chart one is interested in knowledge in support of competitive advantage. Senior executives are concerned about the health of the entire organization and, therefore, need a broad set of knowledge.

Towards the bottom of this chart one is interested in knowledge that leads to the desired return. In most organizations, people at the lower level of planning and control have narrower knowledge needs (see the following table\textsuperscript{111}) and therefore take a narrower view of this matter.

<table>
<thead>
<tr>
<th>Table 3 Functional Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting and Finance</td>
</tr>
<tr>
<td>Administration</td>
</tr>
<tr>
<td>Executive</td>
</tr>
<tr>
<td>Intermodal</td>
</tr>
<tr>
<td>Maintenance and Engineering</td>
</tr>
<tr>
<td>Marketing</td>
</tr>
<tr>
<td>Sales</td>
</tr>
<tr>
<td>Transportation</td>
</tr>
</tbody>
</table>

Personnel in the transportation function may be concerned about GPS to enable real-time tracking of the firm's assets. This is likely not to be a concern of accounting and finance. Accounting and finance will, however, be concerned with the nature of investment required for this capability.

\textsuperscript{110} (Drogan 2008)

\textsuperscript{111} (Drogan 2008). The functions listed here are based on those one might find in a freight railway.
Together, Figure 47 Planning and Control Levels and Table 3 Functional Areas also helps us deal with the question of currency.

By currency, I mean how up-to-date the knowledge is. Data that is one second old may be more current than data that is one hour old, but may also be less relevant.

At the strategic planning and control level knowledge does not to be as current as at the operational level.

The currency characteristic is also shaped by the functional area. For example, changes in the knowledge that affects administration are likely to be less frequent than those affecting transportation.

Simply put, then, what one needs to know depends on where one sits in the organization.

Knowledge arriving after the decision window has closed may not only useless, but have an unacceptable opportunity cost.

It becomes incumbent on us, after defining the required “knowledge kernel,” to determine the actions we need to undertake to keep the kernel current. It becomes incumbent on us, after defining the required “knowledge kernel,” to determine the actions we need to undertake to keep the kernel current.

Keeping current ought to be a regular task in your day. Get the process organized and scheduled.

**It’s Not that Simple**

Were it that simple we could sit in our offices, ask questions, and come to a conclusion as to the breadth, depth, and currency of knowledge required by our job. However, other forces come into play.

For example, culture shapes what one needs to consider regarding the knowledge kernel.

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112 As an example, almost every day I scan some 65 RSS feeds, nine websites, two e-mail accounts, and three social networking sites. In addition I meet on a regular basis with my colleagues at the college and three external groups, scan and/or read two daily newspapers, one weekly news magazine, a number of less frequently published trade, business, and political journals, and am actively reading as many as four books. Keeping current is a lot of work.

113 (Javidan and House 2001)
What knowledge can one get to operate successfully in a culture that exhibits significant power distance?\footnote{114}

The knowledge kernel is shaped by industry and company size. To stretch the point to make the point one might reasonably conclude that the knowledge kernel required to be a hair dresser is simple, in a Snowden sense, whereas that required to lead a global team exploring for oil is complicated.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{snowden_four_ontologies.png}
\caption{Snowden's Four Ontologies\footnote{115}}
\end{figure}

It seems reasonable to me, then, that the tasks of discovering and keeping current the knowledge kernel is very much a function of the industry and company size.

\textbf{Corroboration}

\begin{quote}
\textit{Cor·rob·o·ra·tion}

\textit{n.}

[Cf. \textit{F. corroboration}.]

1. The act of corroborating, strengthening, or confirming; addition of strength; confirmation; as, the corroboration of an argument, or of information.

2. That which corroborates.\footnote{116}
\end{quote}

No longer can we simply accept what we see and hear at face value. Confirmation of the facts is becoming increasingly important. But confirmation takes time and I have previously argued that time is an increasingly critical resource.

\footnote{114}{“Power Distance is defined as the degree to which members of a society expect power to be unequally shared. It represents the extent to which a community maintains inequality amongst its members by stratification of individuals and groups with respect to power, authority prestige, status, wealth, and material possessions. It also reflects the establishment and maintenance of dominance and control of the less powerful by the more powerful.” (Javidan and House 2001)}

\footnote{115}{http://blogs.salon.com/0002007/images/ontologies.jpg [September 1, 2009]}

"I believe that we’re about to witness what may turn out to be the last competitive frontier business will see. It’s going to be a war over the one priceless resource. Time. And when it comes, trust may turn out to be the best investment anyone’s made."

Can one trade collaboration for trust and thereby better cope with the relentless move of the decision window line to the left in Figure 44 Required Knowledge and the Decision Window on page 90? And if one can’t, what is the alternative for coping?

**Understanding**

One of my students wrote:

“One must be cognizant of words being used as some words have multiple meanings and understand which one is being used or to use. Some words carry a different meaning between different countries. For example: My office in the U.S. refers to the word demurrage free-time and detention free-time as terminal free-time and equipment free-time, respectively. In the Callao, Peru office, they refer to demurrage free-time and detention free-time as equipment free-time and detention free-time, respectively.”

This brings me to principles of communication.

1. The grammar and syntax of the messages being exchanged are understood.
2. The information communicated in the messages is relevant.
3. The medium of communication is acceptable.
4. There is a desire to communicate.
5. There is confirmation of understanding.

The data, information, and knowledge required to make decisions has its roots in communication. Language and culture become major hurdles to assuring that the parities communicating have a common understanding of the data, information, and knowledge.

I don’t think you can be comfortable with judging relevance in the absence of understanding.

Further to this point, while researching for this note, I uncovered the following.

**Summary**

Relevancy assumes a critical importance in control system operation because of the large amount of information available. The information deluge impacts the following areas: If information is presented at too high a rate or in too large blocks, the operators may not comprehend it. If useless data is often presented in a given display, the operators may ignore all data presented by that display. If the context of the data is not presented, the data may be meaningless to the operators. If the control and display systems are not properly designed, peaks in the message generation rate may choke the system. This paper describes the techniques in use and under development at the Clinton P. Anderson Meson Physics Facility for increasing the relevance of data both for real-time operations and for long-term analysis of accelerator performance. Data sifting and organization for presentation and for compact storage is discussed.

The message here is to be heeded.

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118 J. Kou, TMGT 7200.1 Written Assignment, January 11, 2007

119 (Swain 1975)
Management

Implicit in any discussion of relevance and understanding is that an underlying management system for data, information, and knowledge exists.

The argument I am advancing is that one needs a "knowledge kernel" and it is the management system that defines and maintains the value of this kernel. Caution here. In the modern world it's very easy to prefix the phrase "management system" with words like data, information, and knowledge. From there it is but an easy step to get into a discussion of supporting information technology (e.g., RAD arrays, SQL).

My experience suggests that the most important decisions regarding knowledge are made by the business. The role of information technology is to support the implementation of those decisions.

![Figure 50 The Interplay Between SIDAL and Knowledge Kernels](image)

Our ability to manage a business, represented by the SIDAL loop in Figure 50, is informed by the knowledge kernels shown to the outside of the loop. Execution of the loop should enhance the value of these knowledge kernels, represented by the single kernel in the middle of the figure. If we do this well these arrows represent virtuous loops that improve the effectiveness and efficiency of our business system.
Coda

What is critical in the context of the role and responsibilities of senior executives, and the decisions they make, is knowledge.

The notion of breadth, depth, currency, and application is summed up in this figure.

Figure 51 Determination

Figure 51 is process whereby one determines what data is required to support decisions. You do not want to collect data unless you know what it is to be used for.

This note has described an approach to defining the all-important knowledge kernel and an approach to applying that kernel to improve the performance of an organization.

I have not aimed at being prescriptive, but rather at being illustrative. My sense is that as your role and responsibilities change to be more encompassing of the goals and objectives of a firm you must take additional responsibility for managing the value of the knowledge kernel. Of course you may have a staff to help you, but at the end of the day, you are the one holding the authority and will be held accountable for the results. The excuse that your staff did not perform is unlikely to be looked upon favorably.

James Drogan
September 1, 2009

120 (Drogan 1999b)
Bibliography


---. 2008. When Technology Fails.


Communications à la Business

March 22, 2010

"They should teach students how to communicate in five-sentence e-mails and with 10-slide PowerPoint presentations. If they just taught every student that, American business would be much better off."

In a November 2003 presentation (How to Use Computers and the Internet in Daily Transactions) I wondered whether "Always on, always connected, always transacting" was a good thing. Today's New York Times brings an article from The Public Editor, The Danger of Always Being On, which provides several examples in support of answering my 2003 inquiry in the negative.

However, as Clark Hoyt suggests, the danger is not solely attributable to an exponential increase in communications momentum, but also to the suspension of judgment in the face of pressures of time and competition, to thinking with keyboard in hand, and to an aggressive attitude regarding transparency. Modern communications has, to some extent, pushed us towards speed, quantity, and being first-off-the-mark to the detriment of thoughtfulness and quality.

The old adage that, "Haste makes waste" comes to mind.
Kudos to the Schwartz Communication Institute

May 2, 2010

Under the leadership of Bernard Schwartz, Herb Brinberg, and Mikhail Gershovich, the Institute put together another highly provocative and valuable symposium on communications and communication-intensive education. Look here for information about the April 30 meeting. I’ve been an attendee and sometime facilitator at these annual conferences since 2002, continually drawn to them by interesting people discussing interesting issues. I always find myself coming away from the symposia with insights and ideas that, with work (sometimes a little, sometimes a lot), improve the quality of what I set out to do in my daily life.

The highlights for me this year were morning keynote by Clay Shirky, the always highly anticipated and valuable roundtable discussions, and the afternoon keynote (especially the remarks by Mona Siu-Kan Lau of UBS). Regrettably, I missed the afternoon workshops which, in the past, have also proved of value.

I suspect a substantial amount of the material presented at the symposium will begin to be made available on the Baruch College Digital Media Library in the near future.

This is one of the anticipated events on my yearly calendar. While this is an invitation only event, invitations may be requested. I suggest that if communications is a large, important part of what you do, contact the Institute and make a request.
We, the global we, have been talking about communication since the dawn of man. Our means have changed as we have become more knowledgeable, as the wish to communicate has developments in pulled us into new means.

But have the ends, the changed? Haven't, aren't, to be to be polite, to and to prompt or forestall the ends are more or less gained in making them about.

Perhaps the “what” is the communicate. One can means of communication in a very rapid manner internet and the World always connected, always mantra of the new world.

(Drogran, 2003)? This raises an interesting question as to whether communications should be pursued so slavishly. Or, to perhaps put this in a more provocative manner, what is the role of silence in communication?

The Harvard Business Review reports:

Information is the lifeblood of business today, yet so many managers and employees convey information poorly in their writing. A recent survey of 120 blue-chip American companies found that a third of employees wrote poorly, a problem businesses are spending more than $3 billion a year to correct (“Guide to Better Business Writing,” n.d.).

Perhaps the “what” is how this remedial expense can be relieved.

Communication does not stand-alone. It rather is the raison d’etre (as indicated in the previous paragraph) for something larger. Perhaps this is the “what” we should be discussing.

Given that modern communication is consuming the attention of people and likely changing their behavior, this may be the “what” to be examined in this seminar.

A study suggests that the high school students who spend the most time texting or on social networking Web sites (or both) are at risk for worrisome behaviors including smoking, risky sex, depression, eating disorders, drug and alcohol abuse and absenteeism (Rabin, 2010).
MIT’s Sherry Turkle has opined "We know that technology changes our lives -- but could it be changing our selves as well (Coutu, 2003)? In the walks I have made between Grand Central Station and Baruch I notice in increasing number of people living in digital bubbles (Drogan, 2009b). Multitasking (Dean & Webb, 2011) also effects behavior and this may be the “what” to talk about.

Tom Davenport, writing in the *McKinsey Quarterly*, opens with

In the half-century since Peter Drucker coined the term “knowledge workers,” their share of the workforce has steadily grown—and so has the range of technology tools aimed at boosting their productivity. Yet there’s little evidence that massive spending on personal computing, productivity software, knowledge-management systems, and much else has moved the needle. What’s more, a wide variety of recent research has begun suggesting that always-on, multitasking work environments are so distracting that they are sapping productivity (Davenport, 2011).

Perhaps the “what” we should be talking about is the relationship between communications and knowledge management.

The tendency of the media to set the agenda for communications (Carroll & McCombs, 2003). “With modern-day society characterized by short attention spans, easy-to-consume media, and text message-friendly acronyms, short is proving to be sweet when it comes to corporate branding” (Argenti, 2009, p. 76)

The final “what” that occurs to me involves the principles of communication (Drogan, 2009a).

1. The grammar and syntax is understood.
2. The information communicated is relevant.
3. The medium of communication is acceptable.
4. There is a desire to communicate.
5. There is confirmation of understanding.

To what extent have these principles changed and does that represent a significant issue that needs to be addressed?

Summarized above is the situation as I understand it at the moment. What remains and will be taken up below is the issue of deciding which what merits examination given the available resources. I will close with some ideas on how to address the paramount what.

James Drogan
November 26, 2010
References


Trust and Communications

June 5, 2011

I have been associated with the Bernard L. Schwartz Communication Institute at Baruch College for a number of years. I have participated, sometimes as a moderator, in several of the annual symposia on communication and communication intensive instruction. During this time, beginning in October 2002, I recall little conversation, formally or informally, on the role of trust in communications.

I am reminded of this by a post, Miriam Meckel on communicating trustworthiness, in David Weinberger’s *Joho the Blog*. It seems to me that effective and efficient communications is profoundly affected by trust. If we do not discuss the issue, then, we compromise, perhaps prevent, meaningful communication.

I want to couple this with words from Jim Kelly, then the CEO of UPS.

I believe that we’re about to witness what may turn out to be the last competitive frontier business will see. It’s going to be a war over the one priceless resource. Time. And when it comes, trust may turn out to be the best investment anyone’s made (2000).

The lack of trust causes us to squander that most important of all nonrenewable resources, time.
How Do You Talk to Big Data?

August 14, 2011


The question under consideration here is, “Should I (and others) better prepare my (our) students to survive, thrive, and make a difference in world awash in big data?” If true, what is the impact on the curricula?

But first, what is meant by “big data?” The full report by McKinsey defines “big data” as:

“Big data” refers to datasets whose size is beyond the ability of typical database software tools to capture, store, manage, and analyze. This definition is intentionally subjective and incorporates a moving definition of how big a dataset needs to be in order to be considered big data—i.e., we don’t define big data in terms of being larger than a certain number of terabytes (thousands of gigabytes). We assume that, as technology advances over time, the size of datasets that qualify as big data will also increase. Also note that the definition can vary by sector, depending on what kinds of software tools are commonly available and what sizes of datasets are common in a particular industry. With those caveats, big data in many sectors today will range from a few dozen terabytes to multiple petabytes (thousands of terabytes) (Manyika et al., 2011, p. 1).

In comparison, the Library of Congress "For instance, we can as of this moment say that the approximate amount of our collections that are digitized and freely and publicly available on the Internet is about 74 terabytes. We can also say that we have about 15.3 million digital items online” (Raymond, 2009).

![Figure 52 Teras, Petas, and Other Unfamiliar Prefixes](ChemPRME Staff, 2010)

Figure 52 is provided to those of us, like me, who struggle with prefixes of this nature.

Except for the mention of “sector” the definition has a strong flavor of technology (e.g., terabytes, software). Of equal importance for the purposes of this note are concepts of breadth and depth of the data as interpreted in a domain specific context.
This notion of breadth (think of the data describing Harry Potter series to a reasonable depth) versus depth (think of data describing Quidditch in a deep fashion) has an impact on what is in and how one talks to “big data.” The two rectangles in Figure 53 cover the same area carrying an implication of the two sets of data having the same size. Clearly, however, they are different data.

The Hook

Consider the chart shown at the left from the announcement to subscribers. Particular notice is to be taken of the size of the employment gap between demand for and supply of “deep expertise in data analysis.” This is opportunity.

This opportunity is calling for, according to McKinsey, “deep analytical talent...advanced training with statistics or machine learning.” A more important line from the announcement is “The United States alone faces a shortage of 140,000 to 190,000 people with deep analytical skills as well as 1.5 million managers and analysts [emphasis added] to analyze big data and make decisions based on their findings”. This is not only a larger gap to be filled, but also a one where the associated roles, responsibilities, risks, and rewards are better aligned with the students I teach, the material I present, and my own experience.

Perhaps this sounds a bit selfish. One the other hand, I’ve always thought that asking the correct question brings one the best answer to enable a better decision. The correct question, more often than not, constitutes the responsibility of the manager and analyst as contrast with the deep analytical talent.

In a recent item from Computerworld Rod Smith, IBM Vice President of Emerging Technologies states “Analytics are terrific, but if you can combine analytics with specific problems and expertise around certain problems, then you can define outcomes in unique ways” (Jackson, 2011).

The Correct Questions

Consider the following sequence.
1. What business decisions must be made and why? Here we are seeking to write declarative sentences that look something like "We need to make a decision about ... because it will affect how we ..." These need to be decisions of significance to the firm.

2. How will these decisions be made and why? By how I mean the general approach to making the decision. For example, a decision on which container to move next will be based upon a) the value of the goods to the shipper and 2) the value of the shipper to the organization. It's useful to also write declarative sentences to help answer these questions.

3. What data is required and what will be its source? (Drogan, 2007a)

The manager and analyst play a role of more significance in this sequence than the deep analytical talent.

Asking the correct question depends upon 1.) understanding of context (Drogan, 2009), 2.) knowledge of how the business works to produce the desired outcome (Drogan, 2007b), 3.) courage to question commonly accepted practice, and 4.) capacity to continually learn so as to ask better questions in the future. One would more likely attribute these qualities to managers and analysts than deep analytical talent.

**SIDAL and the Principals**

There are two sets of capabilities under consideration here; the managers and analysts, and the deep analytical talent. I consider them interdependent and distributed around the SIDAL (sense, interpret, decide, act, learn) loop as shown below.\(^{121}\)

The black arc represents where managers and analysts play a dominant role. The gray arc represents the domain of the deep analytical talent.

I suggest correct questions above. Here, it becomes evident that that managers and analysts have a responsibility for properly managing two new assets in pursuit of the answers to the questions; the big data and the deep analytical talent that knows how to get at the big data.

Formal education thus needs to address the development of knowledge and skills in managers and analysts to enable the management of these new assets.\(^{122}\)

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\(^{121}\) The SIDAL loop is adapted from Adaptive Enterprise: Creating and Leading Sense-And-Respond Organizations (Haeckel & Slywotsky, 1999).

\(^{122}\) I cannot comment on the educational requirements in analytics since I have no experience in the field.
Education

We can usefully call upon Rudyard Kipling’s Six Best Friends to examine the educational issue:

1. **What** are big data and analytics?
2. **How** can these assets add value to a business?
3. **Why** should these assets be developed and deployed?
4. **Who** is responsible for and critical to the management of these assets?
5. **When** should these assets be used?
6. **Where** should this activity be conducted?

Education should endeavor to help provide the answers to these questions.

What are other institutions doing regarding education of this nature?

...Yale University, with the belief that next generation jobs will require analytics skills, collaborates with IBM to provide analytics skills to its MBA students to become future business leaders.

...“The business world continues to become more complex and information is at the center of all its challenges. Analytics has quickly become one of the most important skills required to prepare our business leaders of tomorrow. The Yale School of Management and its dedicated Center for Customer Insights is pioneering the way by exploring new ideas that bring business and technical skills together that will be a significant engine of growth for our economy” (Farrah, 2011).

Courses and Tutorials

- CS302 Fundamental Algorithms
- CS360 Systems Programming
- CS456 Computer Graphics
- CS494/594 Networked Games
- CS494/594 Computer Graphics
- HPC for General Data Analysis and Visualization
- Multivariate Temporal Features in Scientific Data
- Parallel Visualization - An Introduction
- Remote Visualization - A Survey (Huang, 2010)

Statistics

- Algorithmic Trading
- Algorithmic Trading and Quantitative Strategies
- Decision Making Under Uncertainty in Financial Services
- Intermediate Biostatistics: Analysis of Discrete Data
- Introduction to Mathematical Finance

Responses to Google inquiry “big data university courses.” About 75,900,000 results. Top 30 responses reviewed.
The general tone of the response was similar to the sample above – emphasis on the assets. What is being published regarding the business value of big data and analytics?124

2. Managing ‘Big Data’ in Financial Services (Fanzilli, 2011)
3. Managing Customers in the Age of Big Data (Lester, 2011)
5. Big Data Delivers Big Value (Groenfeldt, 2010)

Not evident in the search results is specific education for manager and analyst on how to manage the assets of big data and deep analytical talent. Perhaps this is partially explained by the attitude expressed in these words.

In the case of data-savvy managers and analysts in a big data world, the level of training and mathematical aptitude is much lower than that required for deep analytical talent. People in these roles simply need enough conceptual knowledge and quantitative skills to be able to frame and interpret analyses in an effective way. It is possible to develop such skills through a single course in statistics and experimental design (Manyika et al., 2011, p. 105).

The argument against these rather condescending words is the manager and analysts require a different set of knowledge, skills, experience, attitude, and behavior. Big data and deep analytical talent is not enough.125

The Issue

I now move to the issue of the design, development, implementation, and operation of a management system that can extract optimum value from the two sets of assets. It appears that the asset class deep_analytical_skills has a development plan. The courses available from Yale are an example.

124 Responses to the Google query “business value big data.” About 32,100,000 results. Top 30 responses reviewed.

125 One of the issues raised in the various post mortems that have taken place in the wake of the global recession has been over reliance on mathematical model and their creators (aka “quants” and deep analytical talent).
It is not clear how the asset class big_data is developed although a presentation on Watson (IBM, 2011a) provided examples of how this was and is being accomplished in specific domains. The hypothesis here is that big_data of value is a function of domain expertise and a measure of curiosity that provokes uncommon ideas and questions. After all, progress is likely not to be made by looking at the same data in the same way. This suggests that big_data is the responsibility of managers and analysts. Domain expertise can be taught and learned through experience. What about curiosity? How can that be taught?

Conversation constitutes the interface between the asset and the manager/analyst class. What are the set of rules that govern this conversation? How are these rules learnt and taught?

Figure 55 is a conceptualization of key components of a system to manage big data and analytics. The components and their relationships of most concern in this note are bounded by the broad gray line. The hypothesis is that managing the asset classes identified herein is different than managing other asset classes. It follows therefore that the education and experience is different from that provided for managing other asset classes.

There is much to be learnt from the experience of others in engaging with big data and analytics. For example, two presentations at a recent conference sponsored by IBM are likely to be an excellent source of guidance on these matters (IBM, 2011a).

1. *Watson: The Journey to Jeopardy and Beyond!* - Dr. Eric Brown, IBM Research Scientist, DeepQA/Watson Project
2. *Panel: University Thought Leaders on the Application and Implications of Watson’s Technology* -
   -- Moderated by Kevin Faughnan, Director, IBM Worldwide Academic Initiative
   -- Dr. Herbert Chase, Professor of Clinical Medicine, Columbia University
   -- Dr. Jim Hendler, Tetherless World Chair, Department of Computer Science, Rensselaer Polytechnic Institute (RPI)
   -- Dr. Ron Jordon, Dean, College of Pharmacy, University of Rhode Island

It is far too easy to think that education keeps pace with technological development and the profound effects this development has on the way humans interact with each other and with objects. The mutually satisfying conversation that a parent has with a child is not the same as a
mutually satisfying conversation that same parent has with, say, a Nobel laureate. The conversation one has with big data and analytics is likely to be a new kind of conversation.

The first law is “Know what you know, know what you don’t know, and know who knows what you don’t know” (Drogan, n.d.). The process of working with big data and analytics is akin to adding to what you know by moving information from the right to the left in the three parts of the law.

Figure 56 Knowledge Movement

The sense here is that extracting value from the promise of big data and analytics will require an upgrade to the performance of the links between the blocks in Figure 56.

Explanation is required for the two blocks – undiscovered knowledge and archived knowledge – not mentioned in the law.

“In 2010, more than 1,200 exabytes of digital information were created. A single exabyte is equal to about 1 trillion books” (Maney, Hamm, & O’Brien, 2011, p. 126). It is reasonable to hypothesize that no one can grasp or, only slightly less likely, manage information of this magnitude. The undiscovered knowledge block represents this information. It is also reasonable to hypothesize that there is potential value in this knowledge. The intent then ought to be to move this undiscovered knowledge into the stream represented by the blocks to the left.

A further hypothesis is that the human has a finite capacity for knowledge. From time to time knowledge no longer needed is archived to make room for knowledge having more immediate value. For example, over the last several months I need to compute the number of relationships between a number of objects. This turns out to be a simple formula which I knew many years ago, but had archived it (or perhaps simply forgotten it).126

**Example**

Consider the following:

What must I do to successfully execute a cross-border trade transaction for the movement of X amount of Y from point A to point B.

When

Adrian Gonzalez…ARC Advisory Group, estimated that a typical cross-border shipment involves the accurate completion and filling of 35 documents, interfacing with 25 parties including customs, carriers and freight forwarders, and complying with over 600 laws and 500 trade agreements that are constantly changing (Cottrill, 2003).

And

Can I do this at a profit?

Knowing that

---

126 The formula, \(n \times (n-1)/2\), is now archived on my iPhone.
Sustainable competitive advantage comes from implementing management initiatives faster than the competition, and backing out failed initiatives just as quickly.\footnote{This phrase was first used in a consulting engagement with a major US railroad in 1995. This ties into the notion of response mentioned several times in this note.}

Can BDA (big data and analytics) help? What do I need in the way of BDA assets, and, equally importantly, how do I talk to BDA?

**Watson**

Watson is an example of BDA applied in context. The context is Jeopardy.

Jeopardy! is an American quiz show featuring trivia in history, literature, the arts, pop culture, science, sports, geography, wordplay, and more. The show has a unique answer-and-question format in which contestants are presented with clues in the form of answers, and must phrase their responses in question form ("Jeopardy!", 2011).

Watson is an example of DeepQA (Deep Question Answering).

The DeepQA project at IBM shapes a grand challenge in Computer Science that aims to illustrate how the wide and growing accessibility of natural language content and the integration and advancement of Natural Language Processing, Information Retrieval, Machine Learning, Knowledge Representation and Reasoning — along with massively parallel computation — can drive open-domain automatic Question Answering technology to a point where it clearly and consistently rivals the best human performance ("The DeepQA Project," n.d.).

Jeopardy! was selected as a public test for DeepQA because it is a popular and well-known game where success depends upon understanding a breadth and depth of knowledge expressed in rich, natural language and very quickly developing an answer with precision and confidence. And Watson did well.

Facing certain defeat at the hands of a room-size I.B.M. computer on Wednesday evening, Ken Jennings, famous for winning 74 games in a row on the TV quiz show, acknowledged the obvious. "I, for one, welcome our new computer overlords," he wrote on his video screen, borrowing a line from a "Simpsons" episode (Markoff, 2011).

For a four minute video of Watson in action see IBM’s Watson Supercomputer Destroys All Humans in Jeopardy (IBM’s Watson Supercomputer Destroys All Humans in Jeopardy, 2011)\footnote{IBM’s Watson Supercomputer Destroys All Humans in Jeopardy, 2011}

Watson combines big data, “a database of about 10 million documents” (Gartenberg, 2011), sophisticated question answering analytics based on the principles of critical thinking complemented by an ability to assess confidence in the answer and learn as it is applied, enabled by powerful technology, “a brain the size of 2,400 home computers” (Gartenberg, 2011). For a more detailed explanation (22 minute video) see How Watson Works (How Watson Works, n.d.).
**Watson from Idea to Action**

In the summer of 2011 I attended two IBM events pertaining to this matter of BDA (IBM, 2011a, 2011b). From these meetings emerged a structure of which may explain how Watson came to be.

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**The Rise of Curiosity**

IBM's development of Blue Gene, the chess player, provokes thinking of applying the underlying concepts in a larger, more open domain marked by the need to accommodate natural language, precision, confidence, and rapid response.

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**Figure 57 A Possible Development Schedule for Watson**

Four years (Maney et al., 2011, p. 82) is a long time in the world of business.

Our mission is to use our knowledge of supply chain management and information technology to help companies achieve their business goals. In these past few months, we find that the definitions of short, medium and long term now mean something completely different:

Short term used to mean within the next six months. It now means “next Monday.”

Medium term used to mean six months to a year. It now means “after next Monday.”
Long term used to mean two to five years out. It now means “over the next six months” (Establish/Herbert W. Davis Company as found in Drogan, 2003).

If business is to take advantage of BDA, especially as exemplified by Watson, then the four years will need to be compressed. The experiences and capabilities of firms such as IBM can help, but these will not be enough. [What are the complete CSFs?]

As suggested in the beginning of this note, managers and analysts who know how to talk to big data will be necessary. An underlying hypothesis is that talking to big data requires a different conversation than is generally practiced in business.

**About the Conversation**

The nature of the conversation is partially a function of the planning and control level.

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![Figure 58 Planning and Control Levels (Drogan, 2008)](image)

Watson was focused on the operational level whereas the question posed earlier -- What must I do to successfully execute a cross border trade transaction for the movement of X amount of Y from point A to point B? – is at the strategic level.

A second dimension of the conversation centers on innovation. If one asks the same questions one is likely to get the same answers. Sameness does not generally lead to competitive advantage. Hence, there is a need for innovative questions, of seeing things through different and multiple lenses, of curiosity, and of being unafraid to ask what might seem to be irrelevant questions. This may be the realm of the generalist.

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128 Replace this chart with a table.
The specialists are the deep analytical talent. The generalists are the managers and analysts.

**Requirements of the Generalist**

Returning to the example introduced earlier (page 119).

What must I do to successfully execute a cross-border trade transaction for the movement of X amount of Y from point A to point B

When

Adrian Gonzalez...ARC Advisory Group, estimated that a typical cross-border shipment involves the accurate completion and filling of 35 documents, interfacing with 25 parties including customs, carriers and freight forwarders, and complying with over 600 laws and 500 trade agreements that are constantly changing (Cottrill, 2003).

And

Can I do this at a profit?

Knowing that

Sustainable competitive advantage comes from implementing management initiatives faster than the competition, and backing out failed initiatives just as quickly.
Context is important in understanding how to address an issue such as this.

Virtually all my classes use the Context of Interest (COI) as a unifying theme. The COI prompts us to ask question beyond the immediate domain of the issue at hand, to understand and take into consideration the externalities that affect the issue. Suppose we consider the example introduced on page 119 as being associated with transportation. Starting from that point in the COI we can ask questions regarding factors affecting transportation. From the manner in which the example is expressed we can conclude that attention needs to be given to socio-political-economic factors that may, in turn, be affected by culture.\footnote{See Cultural Acumen for the Global Manager: Lessons from Project GLOBE (Javidan & House, 2001) for a synopsis of extensive research on how culture affects decisions of middle managers. This is an introduction to the full body of research contained in Culture, Leadership, and Organizations: the GLOBE Study of 62 Societies (House & Global Leadership and Organizational Behavior Effectiveness Research Program, 2004).}

Effective use of BDA is likely to require a grasp of a broad context. For example, in Jeopardy!

The subjects range from standard topics including history and current events, the sciences, the arts, popular culture, literature and languages, to pun-laden titles (many of which refer to the standard subjects), wordplay categories, and even sets of categories with a common theme (“Jeopardy!,” 2011).

One needs, perhaps, to approach the status of a polymath to be successful in such a broad context. Breadth and depth in context may be insufficient. As suggested on page 118, progress is likely not to be made by looking at the same data in the same way.

What do

Nobel laureates,

Winners of the John Bates Clark Medal,

Pulitzer recipients,

winners of the Fields Medal,
awardees of the Man Booker Prize, and Hugo Awards recipients have in common? They ask, and sometimes answer, hitherto unknown questions.

![Figure 61 Unknown Questions](image)

The K labels the region of the known in terms of both breadth and depth. The UK represents the unknown (undiscovered knowledge in Figure 56 Knowledge Movement on page 119). The hypothesis here is that one discovers new meaning by asking unusual questions on both sides of the knowledge frontier. Innovation, arising from the answers, is the progenitor of progress. Thus, to restate from page 122, there is a need for innovative questions, of seeing things through different and multiple lenses, of curiosity, and of being unafraid to ask what might seem to be irrelevant questions.

This suggests a need for managers and analysts having sets of knowledge, skills, experience, attitudes, and behaviors (the BDA portfolio) that may be in shorter supply than McKinsey comprehends. I doubt that, shortage notwithstanding, one could simply pluck “1.5 million managers and analysts” from today’s ranks and reap the rewards of the BDA promise. Higher education needs to consider whether changes to existing curricula ought to be made to deliver a higher quality graduate into the workforce.

**Ideas for Action**

The principal objective of the academy is to turn out graduates who can contribute to the well-being of society. It does this through a structure.

![Figure 62 The Structure of the Academy](image)

1. The first order of business ought to be to understand the nature of the demand for graduates from the traditional employers of graduates on the basis of growth potential in three areas.
   a. Industries
   b. Relevance of BDA in the industries
   c. Expectation that the industries have for graduates with a strong BDA portfolio
2. If there is a strong presence of growth in these three factors, then existing programs ought to be examined with an eye towards aiming the output of the academy more precisely at the targets identified in the growth analysis.

3. Pick a program to use as a pilot to validate the hypotheses advanced in this note.

4. Decide on the basis of the results from the pilot that other programs ought to be adjusted.

5. Look for opportunities to attract the attention of nontraditional employers.

An alternative approach would be to obtain a grant and team with an industry partner to apply BDA to, say, the example of cross-border trade transactions mentioned earlier. This is seen as more of an effort to stimulate demand for graduates with strong BDA portfolio than to respond to existing demand (if it is indeed there). As such it also appears less risky and consequently less rewarding than the broader scope first sketched out in this section.

Closing Words

Spaceship Earth is marked by increasing complexity and rates of change, often in ways that are not easily seen and understood, and attended by unforeseen consequences. A fundamental tenet of systems theory is the more complex the system the less one understands how it works.

The response in these circumstances is to develop increasingly complex and responsive control mechanisms. BDA, including the specific examples of Watson and developments in the healthcare industry, represent efforts at the cutting edge of new control mechanisms.

People carrying the appropriate BDA portfolios are factors critical to the success of these endeavors. Higher education, therefore, has a significant opportunity to not only turn out the 140,000 to 190,000 people with deep analytical skills, but also, and more importantly, in my view, the 1.5 million managers and analysts.

James Drogan
August 14, 2011
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Serendipitously, one of my uninfected students wrote:

With technology advancing as fast as it is, the ability to communicate with people all over the world instantaneously has become a foregone conclusion. Does this mean that we will be able to understand each other better or just communicate faster? (Barnett, 2011)

Barnett raises an interesting question. Do instantaneous communication, always on, always connected, always transmitting, huge amounts of data ("In 2010, more than 1,200 exabytes of digital information were created. A single exabyte is equal to about 1 trillion books“ (Maney, Hamm, & O’Brien, 2011, p. 126)), and enormous bandwidth equal better understanding between peoples?
Preparatory Note for the Twelfth Annual Symposium on Communications and Communications-Intensive Instruction

Bernard L. Schwartz Communication Institute
Baruch College
June 1, 2012

May 31, 2012

**Initial Questions**

With whom and what must we converse and how should this conversation be conducted?

Example:

Jim: Appointment.
Siri: OK, James I found at least 25 appointments.
Jim: New appointment.
Siri: OK, when’s the new appointment?
Jim: Tomorrow at 4PM.
Siri: OK, here’s your meeting. Note that you have 4 appointments that overlap with this. Shall I schedule this anyway?
Jim: Yes.
Siri: I put it on your calendar for tomorrow.
Jim: Thank you.
Siri: I aim to please.\(^{130}\)

“Machines claim to be conscious. These claims are largely accepted” (Kurzweil, 2000).

**Initial Discussion**

The whom and what are represented by the everythings.

1. Everything that is important is always visible.
2. Everything that needs to be managed is always reachable (Drogan, 1999).

The essential first step in answering the initial questions lies in the selection of the everythings. These emerge from the consideration of the following questions (Drogan, 2002).

1. What business decisions are made to capture these opportunities and why?
2. What approach to making these decisions can be taken and why?
3. Where will the data be sourced in support of these decisions and how?
4. What are the risks associated with realizing these new opportunities and how can they be mitigated?

\(^{130}\) A recent experiment with the iPhone 4.
5. What are the associated costs?

These questions emerge from consideration of what the organization or person is all about. One way to understand this is through the application of the business configuration model (Drogan, 2005).

1. What business decisions are made to capture these opportunities and why?
2. What approach to making these decisions can be taken and why?
3. Where will the data be sourced in support of these decisions and how?
4. What are the risks associated with realizing these new opportunities and how can they be mitigated?
5. What are the associated costs?

The answers to these questions are a function of understanding:
- Values
- Vision
- Mission
- Goals
- Strategies
- Critical Success Factors
- Assets
- Key Performance Indicators
- Objectives
- Actions
- Business System

To the identification of the everythings and the answers to the five questions one needs to add the motivators of the conversation (Drogan, 2007).

1. To be polite
2. To attract attention
3. To inform
4. To prompt or forestall action

We now seem to be in a position to determine how the conversation should take place and have the basis for judging its effectiveness.
May 25, 2013

“...the two themes of this year's event are literacies and storytelling” (Gershovich, 2013).

Literacy is "competence or knowledge in a specified area: "wine literacy can't be taught in three hours" (Google, 2013).

"Storytelling is the conveying of events in words, images, and sounds, often by improvisation or embellishment. Stories or narratives have been shared in every culture as a means of entertainment, education, cultural preservation, and to instill moral values. Crucial elements of stories and storytelling include plot, characters, and narrative point of view” (Google, 2013).

Literacy is further defined as a collection of sets of knowledge, skills, experiences, attitudes, and behaviors (Drogan, 2011b). These sets – literacies – are a function of the context. For example, the literacy required to be successful in banking is different than required for being the master of a ship. There is, however, a kernel of common knowledge.

Kernel

Mastery

Supporting

The General Education courses required in higher education are representative of the kernel. This brings up an interesting question. What kernel should one possess in order to be valuable to as wide an audience as possible?

The kernel, of course, must have some relationship to the context.

Figure 63 Knowledge Kernel

The hypothesis is that the kernel must be related to the context. Figure 64 The Context of Interest is an example of a context (Drogan, 2009a). This suggests that there is a trade-off between what is in the kernel and what is in the mastery.
Depending on the relative strengths (i.e., breadth and depth of knowledge, skills, and experiences) of the kernel one is may need to decide between a generalist and specialist role (Hardy, 2007).
The generalist exhibits capabilities (i.e., knowledge, skills, experiences, behavior) characterized by breadth whereas the specialist exhibits capabilities characterized by depth (Drogan, 2011a).

So, which comes first; literacy or stories?

I'm inclined to think that literacies, particularly when described in a formal fashion such as a profession -- "A profession is a vocation founded upon specialized educational training, the purpose of which is to supply objective counsel and service to others, for a direct and definite compensation, wholly apart from expectation of other business gain" ("Profession," 2013) – emerge from stories. The literacies, put into practice generate more stories that serve to change the literacies.

Literacies may not last forever. For example, one would need to work hard to discover anyone that has the literacy associated with being a lamplighter.

This suggests that literacies should, in a sense, be actively managed to remain relevant in the context with which they are associated.

Referring back to Figure 63 Knowledge Kernel, the literacies can be considered to include the kernel, mastery, and supporting. Given the dynamic nature of the world one may continually need to adjust the mechanism for producing the literacies. For example, the composition of education is constantly changing as the needs of the world change.
Literacies produce value to the extent that they are relevant to needs. When they are no longer relevant, like the lamplighter, they fade into history. It may be important, therefore, to have a means of detecting the incipient decline of literacies. That is, the rise and fall of literacies may very well have something in common with the dynamics of innovation (http://theory.isthereason.com/wp-content/s_curve.gif).

The Bernard L. Schwartz Communication Institute at Baruch College is a nationally recognized academic service unit and faculty development program dedicated to supporting undergraduates’ development as confident, purposeful and effective communicators. Through our support of Communication Intensive Courses (CICs) as well as our efforts in the City University of New York’s Writing Across the Curriculum (WAC) program, we work to ensure that Baruch students encounter many different forms of communication in many different disciplines over their course of study. We develop, oversee and support a wide range of educational technology projects and are actively engaged with an international community of educators interested in the implication of technology and social media on teaching and learning. We sponsor a wide range of professional development activities for Baruch faculty and administration and engage in sustained dialogue on communication and communication intensive instruction with leading business professionals and educators from around the country (“Bernard L. Schwartz Communication Institute,” n.d.).

The Institute is engaged in the development and promulgation of communication literacies that lie at the nexus between the academy and those, chiefly non-academic organizations, employing the graduates of Baruch College.

Literacies are transmitted and transformed by stories. Stories transmit the essentials of the literacies; the what, why, how, when, where, and who. Stories are told in adherence to principles of communication.

1. The grammar and syntax is understood.
2. The information communicated is relevant.
3. The medium of communication is acceptable.
4. There is a desire to communicate.
5. There is confirmation of understanding (Drogan, 2009b).

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131 I’ve been involved with the Institute since early 2002.
The senses (http://vpcil-five-senses.wikispaces.com/file/view/5-senses.jpg/209809908/776x607/5-senses.jpg) have a role to play in the manner in which the stories are told. For example, in the literacy of cooking all five senses are involved in effectively and efficiently telling the story.

Some stories, music comes to mind, rely principally on a single sense.

Some stories, for example those associated with business trends, whilst relying principally on the sense of sight, may be better conveyed in pictures rather than words.

Suppose, as an example, you wished to inform someone of the value of the US dollar versus G-10 countries.¹³²

![Figure 69 Value of the US Dollar versus G-10 Countries](image)

Another way to do this is to show the underlying data.

Clearly the trend is better shown in Figure 69 Value of the US Dollar versus G-10 Countries than in Figure 70 Business Communication.

For example, here is an abstraction of the principal components of a potential undergraduate course in Business Communication as developed by a group of individuals with deep understanding of and long experience in business. These principal components cannot be blindly applied in any situation. Students of storytelling need to know how to modify and prioritize these principals based upon a reading of the intended audience.
The SIDAL loop (adapted from Haeckel & Slywotzky, 1999) is a useful way to demonstrate this process. One develops some sense of the audience; its likes and dislikes, agendas and expectations, communications preferences, and the like. One then interprets this sense in the context of the expectations one has for the communication. A decision is made as to how the components of communication ought to be modified to meet the one's expectations. The communication is performed (i.e., act) as designed and a subsequent learning step aims at improving one's ability to tell stories.

**Figure 71 SIDAL**

Finally, it's useful to remind ourselves of why we tell stories:

1. To be polite.
2. To attract attention.
3. To inform.
4. To prompt or forestall action (Drogan, 2007b).

A few closing words seem in order.

We focus on literacies and storytelling with the aim of improving our ability to design, develop, implement, and learn from the focus in order to deliver value into the context of interest. We are purpose-driven, recognize the path dependency inherent in what we do, and appreciate that the heuristic approach for resolution is probably best.

Stories inform literacies and vice-versa. Stories and literacies are a function of the context, a context that is constantly and changing in an accelerating fashion, often in opaque ways. Today's stories may turn out to be stale, irrelevant news tomorrow. To stay relevant we must stay tuned in to the context.

James Drogan
May 25, 2013
References


Principles of Communication

For some time I have focused on five principles of communication (Drogan, 2009a). One way to prepare is to consider whether and to what extent these principles continue to apply in world of today and tomorrow. Further, some notion of the efficacy of their application ought to also be considered.

1. The grammar and syntax is understood.
2. The information communicated is relevant.
3. The medium of communication is acceptable.
4. There is a desire to communicate.
5. There is confirmation of understanding.

Motivators of Communication

A preparatory note for the Seventh Annual Symposium on Communication and Communication-Intensive Instruction identified motivators of communications (“The Seventh Annual Symposium on Communication and Communication-Intensive Instruction,” 2007). I propose to examine these motivators in much the same way as I did the principles.

1. To be polite
2. To attract attention
3. To inform
4. To prompt or forestall action

**Process**

Communications is part of a larger process (Drogan, 2009b).

1. pay attention
2. listen and hear
3. understand
4. practice tolerance
5. accept
6. work in a more positive way for the common good.

**Quantity Covers Quality**

The decision window is defined by the time between when an event is detected and that time beyond which the outcome of the event cannot be changed. The following observations are made about the decision window.

1. The decision windows are becoming increasing smaller. Perhaps the best example of small decision windows is flash trading.\(^{133}\)

2. The decisions are becoming more complex. That is, the sense, interpret, decide, and act loop is becoming correspondingly complex. Flash trading serves as a useful example here as do international socio-economic-political decisions.

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\(^{133}\) A controversial computerized trading practice offered by some stock exchanges. Flash trading uses highly sophisticated high-speed computer technology to allow traders to view orders from other market participants fractions of a second before others in the marketplace. This gives flash traders the advantage of being able to gauge supply and demand and recognize movements in market sentiment before other traders ("Flash Trading Definition," 2014).
3. Increasing rate of information generation and a rate of discerning the relevant information that is not keeping pace. This leads to increase in noise further complicating the decision process.
Writing Papers in Jim Drogan’s LEAD Course

July 4, 2014

SPECIAL NOTE: What follows is intended to apply only to the LEAD course taught by me, Jim Drogan.

Introduction

The general approach to covering a topic is shown here.

![Figure 73 Writing in the Context of Learning (Drogan, 2014)](image)

The topic is introduced in the second half of, in this case, a Monday class. The arrow represents the homework comprising reading, thinking, discussion, and writing. The writing is your feedback to me on the topic under consideration. On the subsequent Monday (n+1) I provide feedback to you on your writing.

Writing is not optional in this course. You will generally be submitting a one to two page paper every week. The structure and approach to developing this paper will be covered below.

It matters little how smart you are if you cannot clearly communicate that smartness. Writing is a major way in which you do that. Learn to write well.

Writing also helps clarify thinking. You will get lecture notes from me (e.g., *Thinking About Vocations, Relationships*) that almost always begin as a means of helping me check the quality of my thinking on an issue.\(^{134}\)

The process I follow and which I strongly recommend to you is summarized in Figure 74.

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\(^{134}\) Go to the Luce Library, ask to see *Drogan Notes 2009.0* for a more comprehensive example of these notes.
Since this process takes time, start early. Time is the most precious resources you have or will ever have. Time is a non-renewable resource. Once it’s gone it’s not coming back. Rudyard Kipling in *If* has these lines:

If you can fill the unforgiving minute  
With sixty seconds' worth of distance run,  
Yours is the Earth and everything that's in it (Kipling, n.d.)

Papers are due well prior to the second Monday. If you wait until the last minute your papers will reflect the squandering of this most precious of resources. Your grade will likewise reflect that.

**Principles of Communication**

Keep in mind the following principles for communication:

1. The grammar and syntax is understood.
2. The information communicated is relevant.
3. The medium of communication is acceptable.
4. There is a desire to communicate.
5. There is confirmation of understanding (Drogan, 2009).

Some suggestions on each of these follow.
The Grammar and Syntax is Understood

Grammar comprises the words you use and syntax is the manner in which you put these words together to convey your thoughts. First, don’t use words you don’t understand. Second, don’t put the words together in a syntax you don’t understand. I don’t expect you to write using the grammar and syntax of an undergraduate senior. In short, don’t try to be someone you’re not.

Second, even if you are fluent in the English language with a grammar and syntax up there with the best offered by The New Yorker, it may not be the grammar and syntax understood by your reader. All of us, I suspect, have encountered writers whose use of the language makes no sense at all. Don’t be a writer like this. Be considerate of the reader.

Let me repeat in order to be clear. First, use a grammar and syntax with which you are comfortable. Second, be sure the grammar and syntax is acceptable to the reader. LEAD is not a course that requires sophisticated writing. The watch words are – clear, precise, and concise.

“Short words are best and the old words when short are best of all.” - Winston Churchill

The Information Communicated is Relevant

My LEAD assignments will generally be specific. Be sure your writing is relevant to the assignment. Resist the temptation to wonder off into interesting paths. I, and people for whom you will work, ask specific questions for a purpose. Generally it is in order to support a decision that needs to be made. They and I may ask that the information be presented in a certain fashion. Please accommodate these requests.

The Medium of Communication is Acceptable

There are a number of media we use to communicate; written, oral, picture and symbols, body language, texting and perhaps others. For example, if Mary and I want to reach our granddaughter we text, not e-mail. We use FaceTime to reach our young grandsons.

The medium of communication for written assignments in this course, unless you are advised otherwise, is a Microsoft Word (.doc or .docx) or RTF (Revisable Text Format, .rtf) document. Documents received in other formats will be returned unopened. I’ll have more to say about the specific of the document structure a bit later.

There is a Desire to Communicate

I suppose it’s fair to say that in a LEAD course desire doesn’t have anything to do with these requested assignments. In a sense, you are compelled to deliver. But I want you to consider this principle beyond simply this course.

If your superiors ask a question or request analysis of you, please give them the benefit of the doubt. That is, there is a desire to know. You should have an equal desire to communicate an answer. Desire leads to higher quality work.

There is Confirmation of Understanding

Communication can be and often is one way. For example, The New York Times communicates to its readers, but very few readers react in other than a general way to this communication. I suppose Letters (i.e., letters to the editor) are examples of reader reactions. In some cases these letters may even indicate a confirmation of understand. And I reckon that when subscribers retain their subscription they are, in a way, confirming understand.

Communication (one way) and confirmation of understanding (the other way) are the components of a conversation. And it is in conversation that discovery and learning takes place.

Conversation is the goal. The written assignment is part of one of four conversations that take place in this course. That is I introduce the topic via a lecture in class, you complete a written assignment on the topic, and I provide feedback on what you have written.
These Principles of Communication emerge from experience gained over a long career in business and higher education. They are worth remembering.

**Structure of Papers**

During your time here at Maritime you will be introduced to and be required to use formal systems for structuring papers. These systems will go by acronyms and names such as APA, MLA, Chicago, and others. When you graduate you will be expected to be able to write papers using one of these styles. This paper, for example, uses the APA system for citations, but the format is my own, one that I think is more appropriate to the purpose of these notes.

I will not ask you to use a specific system on your papers in this course for I think there is a more important set of objectives.

1. Clarity and rigor of thinking.
2. Clarity in the expression of the results of that thinking.

This is not meant, however, to keep you from using a formal system with which you are familiar.

The structure should look like this.

<table>
<thead>
<tr>
<th>Name of the Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your Name</td>
</tr>
<tr>
<td>Date Submitted</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>First Section: Generally a single paragraph describing what you have been asked to do.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Second Section: One or more paragraphs discussing the topic.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Last Section: Your conclusions and recommendations</td>
</tr>
<tr>
<td>References:</td>
</tr>
<tr>
<td># (page number)</td>
</tr>
</tbody>
</table>

The page should be letter size (8.5” x 11”) with one-inch margins, headers, and footers.

The font should be something standard. This is Cambria. Times New Roman and Calibri are also good fonts. Whatever you use it should be proportional and easy-to-read.

Single-space the lines with six (6) point spacing between paragraphs.

You want your paper to be the result of good critical thinking and quality writing, and be attractive in appearance. You want it to say to the reader, “Read me! Read me!”
Stay away from color and other gimmicks. Don’t use pictures and other graphics unless they add real value.

The assignments in this course should take no more than two pages. At times a single page (roughly 500 words) may be sufficient. Please do not pad your paper. It’s a waste of your time and mine. Say what you have to say, then stop.

The file naming convention should be

LEAD 101-xx Written Assignment n, Last Name, First Name

xx is the section number for your LEAD course and n is the number of the class when the assignment was made.

Assignment submissions and feedback will be through the ANGEL Learning Management System.

**Other Considerations**

**Why Communicate?**

Why?

a. To be polite
b. To attract attention
c. To inform
d. To prompt action

The what and why of communication are intertwined. One or the other may be the antecedent depending upon why the communications is to take place. For example, just about any kind of a “what” may be used to attract attention. On the other hand, if the intent is to inform, then the “what” can’t be anything that comes along.

![Figure 76 Why Communicate?](image)

The snip in Figure 76 is from a preparatory note I wrote for a April 2006 seminar (Drogan, 2006). We need to be mindful why we’re communicating for this informs the what, how, when, where of our communication as well as the who.  

So why are you submitting these assignments?

**Feedback**

I use the markup tools in Microsoft Word to markup your document that I will then send back to you. Here’s an example.

![Figure 77 An Example of Markup of a Paper](image)

135 What, why, where, when, how, and who; aka Rudyard Kipling’s Six Best Friends. This is a handy set of helpers to keep in mind when you are thinking critically.
I will point out grammar and syntax errors in this fashion and make additional points for your consideration. The idea behind the feedback is to be as constructively and transparently critical as I can be of your assignment.

Coda

Ethics, critical thinking, and communication (Drogan, 2009) are, in my experience, essential for success in the business world. You may already possess a final honed sense of these. We’ll see.

In any event the intent here is to develop these further. The written assignments are critical to this process.

James Drogan

July 4, 2014

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References


Index

behavior, 9, 31, 52, 53, 61, 77, 80, 105, 106, 115, 135
business configuration, 54, 132
business drivers, 32, 98
data, 9, 10, 15, 16, 17, 18, 19, 20, 21, 23, 30, 40, 57, 60, 62, 85, 86, 87, 90, 91, 93, 95, 96, 97, 111, 112, 113, 114, 115, 116, 117, 118, 120, 122, 126, 129, 131, 137, 138
decision window, 3, 6, 8, 23, 24, 29, 57, 79, 87, 88, 90, 93, 95, 142
discussions, 15, 77, 103
examinations, 52
Gambs, 15, 16, 20
goals, 22, 56, 97, 119
goals and objectives, 22, 97
growth, 61, 69, 77, 78, 82, 114, 123, 124
Haeckel, 23, 26, 41, 43, 52, 67, 78, 81, 113, 139, 140
hypotheses, 57, 58, 61, 124
IBM, xv, 55, 67, 90, 112, 114, 116, 118, 119, 120, 126, 127
information systems, 9, 31
investment, 5, 88, 92, 95, 109
knowledge, 2, 9, 15, 16, 17, 18, 19, 24, 25, 30, 32, 35, 38, 40, 42, 56, 62, 65, 77, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 106, 113, 115, 117, 118, 119, 123, 125, 133, 134, 135
Learning, xv, 25, 28, 33, 42, 52, 64, 88, 112, 115, 118, 136, 139, 145, 147, 149
management system, 96, 115
Managing by Wire, 23, 26
Nolan, 23, 26
objectives, 22, 148
pattern recognition, 15, 20, 25
people, xv, 4, 9, 21, 25, 34, 39, 53, 64, 69, 76, 78, 80, 89, 90, 92, 103, 105, 106, 112, 124, 129, 147
principles, 9, 16, 31, 38, 55, 63, 64, 75, 78, 95, 106, 118, 136, 141, 146
principles of communication, 9, 16, 64, 75, 78, 95, 106, 136, 141
process, 17, 20, 42, 52, 55, 58, 59, 62, 75, 87, 89, 93, 97, 117, 139, 142, 143, 145, 146, 150
processes, 9, 22, 29, 79, 90
Project GLOBE, 28, 63, 64, 77, 82, 98, 122, 126
range, 9, 31, 79, 105, 106, 111, 122, 136
reach, 17, 57, 105, 147
reachable, 131
relevance, 18, 19, 60, 61, 78, 90, 95, 96
risk, 23, 61, 62, 79, 87, 105
roles and responsibilities, 10
Senge, 62, 67
Shipper, 86, 113
tasks, 94
Transportation, 3, 6, 29, 33, 92, 93, 98, 111, 122, 125
Tufte, xv, 17, 18, 26
uncertainty, 23, 87
Union Pacific, 20
value, 4, 9, 16, 18, 38, 51, 52, 60, 62, 73, 76, 77, 86, 89, 95, 96, 97, 103, 113, 114, 115, 116, 117, 136, 137, 139, 149
visible, 131
visualization, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25